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Nutrition as it Affects Tooth Decay[1]

JULIAN D. BOYD, M.D.

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FOR more than fifteen years, records have been collected in this institution dealing with the condition of children's teeth in correlation with the nature of their diets. The first reports of these studies were published in 1928 and 1929 (1 a, b). Evidence was offered that the ingestion of highly nutritious diets had served to check and to prevent tooth decay. Caries of the dentin was given chief consideration in the earlier studies. Caries was interpreted as arrested when the dentin which was exposed in open cavities had become impenetrable to the exploring tine without the employment of any local dental measures. To make possible such appraisal, some or all carious areas as well as non-carious pits and fissures were left unfilled until such hardening of the dentin had become demonstrable, and in numerous instances for several years subsequently. Subjects who remained in the hospital under the prescribed dietary regimen without interruption were observed to develop hardening of dentin within a few weeks, and complete arrest was noted within as short a period as two months. With less exacting control of the diet, more time was required; the establishment of arrest would be demonstrable when the child returned to the hospital after an absence of six months or possibly a year, without opportunity to determine just how much time had been required for the hardening to develop. Clinical observations at repeated examinations subsequently, have given evidence that the hardening of the dentin led to non-progression of the caries in the open cavities, and to freedom from development of newly carious areas of the dentin or of the enamel.

Since the earlier reports were published, the studies have continued. Many children have been observed over long periods of time, and the findings have served to confirm the earlier conclusions. For certain groups of subjects, adequate data have been accumulated to permit valid statistical analysis in terms of the course of the individual child for periods of years. Such analysis is more significant than the cross-sectional averages which have served as the basis for most statistical dental studies. Moreover, it is now possible to review the earlier reports, expressing the findings in terms of the rate of extension of caries, rather than in terms of hardening of dentin. Those analytical methods also permit extension of observations so that they include the rate of involvement of the enamel as well as of the dentin. From a recent compilation of such statistics, the evidence indicates that both enamel and dentinal caries have been avoided or have been lessened in occurrence and in extent concurrently with dietary control.

This presentation is designed to show the trend of the results of the Iowa studies, and to correlate these results with the types of diets which have proved effective in the control of caries.

OBSERVATIONS RELATING TO CHILDREN WITH DIABETES MELLITUS

More than 200 children with diabetes mellitus were observed recurrently between the years 1926 and 1937. A comparable system of control was prescribed for each child based on the objective of maintaining an optimal state of nutrition as well as freedom from glycosuria. The degree to which these objectives were met varied with the degree of cooperation offered by the child and his parents. As a group, the level of control was better than that usually attained in the treatment of children with diabetes, and the nutritional state, in general, was likewise better than that of most non-diabetic children of similar socio-economic status. The average rate of progression of tooth decay observed in the diabetic subjects was far less than that observed in supposedly healthy non-diabetic children reported by other observers (2).

The rate of progression of caries in these children has been measured in terms of the number of newly carious, missing or filled dental units becoming apparent. Tooth surfaces have been used as the

[1] Presented before the American Dietetic Association, St. Louis, October 23, 1941.

dental unit of measurement. Extracted teeth were assumed equivalent to three affected tooth surfaces. In the tabulated results, the term DMF TS is used to signify decayed, missing or filled tooth surfaces.

To eliminate errors due to the shedding or eruption of teeth during the course of the study, and to permit comparison of children of similar age, the records used for statistical analysis were limited to those members of the subject personnel who had shed all carious deciduous teeth at the time of the initial examination used in the study, and who in addition were observed recurrently on numerous occasions for not less than 41 months subsequently. All subjects who met these requirements were included. The group comprised 29 girls and 26 boys; the initial average age was about twelve and one-half years, and observations were maintained in each instance for periods varying from 41 to 99 months, with an average duration of approximately five years. The average number of dental observations for each subject was fourteen.

The course of each of the 55 subjects is shown in the accompanying charts. The duration of observation is pictured, together with the number of newly carious tooth surfaces becoming apparent during that interval, and the approximate time of their discovery. Attention is directed not only to the low incidence of caries in most of the subjects, but also to the long intervals during which no progression of caries in any degree could be demonstrated. Thirty-four per cent of the subjects had no further caries throughout their whole period of study; almost a fourth of the group were free from advancing caries for over five years, half for approximately four years, and ninety per cent for eighteen months or longer. In most subjects who developed further caries while under observation, the increment occurred during relatively brief periods which could be correlated with violations of the prescribed regimen. The rate of annual increment of caries was notably low for almost all subjects who showed caries extension, in terms of the total period of observation; however, if consideration is given to the periods of time during which caries was active, the rate of extension was approximately three tooth surfaces per annum.

From these data one may conclude that the child with diabetes mellitus is not immune to tooth decay; that during periods of time caries may advance as

SERIAL DENTAL STATUS OF 26 TEEN-AGED DIABETIC BOYS, PRESUMABLY RECEIVING PRESCRIBED DIETS

Subject no.	Initial DMF TS*	Terminal	Duration of observation *vs.* time and rate of appearance of newly carious tooth surfaces: each symbol (- or Θ) represents lapse of one month; newly carious tooth surfaces (indicated by symbol Θ) were first observed at approximately the time indicated. In column on the left, DMF TS* refers to the number of decayed, missing or filled tooth surfaces; missing teeth are assumed equivalent to 3 carious tooth surfaces.
36″	0	0	----------
37″	0	0	----------
44″	0	0	----------
60	0	0	----------
101	0	0	----------
103	0	0	----------
86	1	1	----------
45″	3	3	----------
82	4	4	----------
6	7	8	----------Θ----------
92	7	8	----------Θ----------
11	10	12	----------ΘΘ----------
109″	0	2	----------Θ----------Θ
18	2	4	----------ΘΘ----------
84	2	4	---Θ----------Θ--------
74	14	16	----Θ----------Θ
13	10	13	----------Θ---Θ----------Θ
79	10	14	----------Θ-------ΘΘ
58	3	8	----------Θ----------ΘΘ---ΘΘ----------
20	0	3	----------Θ-------Θ----Θ--------
1	15	19	---ΘΘ----------ΘΘ
14″	0	5	----------ΘΘΘΘΘ
43	10	16	----------ΘΘ------Θ-----Θ-----Θ--Θ
81	11	16	----------Θ-ΘΘΘ----------Θ
111	5	14	-ΘΘ----------ΘΘ--ΘΘΘ----------ΘΘ
88	4	11	--Θ----------ΘΘΘΘΘ

Subjects marked with this symbol ″ had been diabetic from the age of eight years or earlier, and had been under diabetic management either at this institution or elsewhere for a correspondingly greater period than indicated by the time limits of the study.

rapidly as in the average range of normal subjects. Our observations lead us to conclude that the control of caries observed in the diabetic child's teeth is a reflection of the adequacy of control of his metabolic anomaly, and that the maintenance of optimal nutrition seems to be the most significant factor in the metabolic control as it relates to the protection of the teeth. Special mention should be made concerning the subjects who showed the highest rate of caries progression. Only 6 children averaged

scribed regimen either quantitatively or qualitatively for any duration of time. Therefore they may properly be considered as examples of situations in which the response reflects the effect of non-control of diet.

The progressive dental status observed in these 55 teen-aged children does not differ in any significant regard from that demonstrable in the whole group of over 200 diabetic children. As a class, the children with diabetes mellitus have shown a notable tendency toward non-advance of caries, and the

SERIAL DENTAL STATUS OF 29 TEEN-AGED DIABETIC GIRLS, PRESUMABLY RECEIVING PRESCRIBED DIETS

Subject no.	Initial DMF TS*	Terminal	Duration of observation *vs.* time and rate of appearance of newly carious tooth surfaces: each symbol (- or Θ) represents lapse of one month; newly carious tooth surfaces (indicated by symbol Θ) were first observed at approximately the time indicated. In column on the left, DMF TS* refers to the number of decayed, missing or filled tooth surfaces: missing teeth are assumed equivalent to 3 carious tooth surfaces.
4″	0	0	----------
37	0	0	----------
58″	0	0	----------
91″	2	2	----------
19″	3	3	----------
42″	4	4	----------
23	5	5	----------
45″	5	5	----------
78	7	7	----------
77	8	8	----------
89	15	15	----------
71″	0	1	----------Θ
96″	0	1	----------Θ
97″	2	4	----------Θ----------Θ----
60	5	7	----------ΘΘ
22	13	15	----------ΘΘ----
48	5	7	----------Θ----------Θ--------
12	3	5	----------Θ----------Θ
11	8	10	---------ΘΘ----------
79	4	7	----------Θ----------ΘΘ
84	5	9	--------ΘΘΘ----------Θ
72	3	7	----------Θ--Θ---------ΘΘ
55	11	15	-ΘΘ----------Θ--Θ----------
57	15	19	----------ΘΘ----------ΘΘ--------
29	7	14	----------Θ----------ΘΘΘΘ----------ΘΘ
13	2	10	-------Θ----------ΘΘΘ-------Θ----------ΘΘΘ
33	11	29	---ΘΘΘΘ----------ΘΘΘΘ----------ΘΘΘΘΘΘ-Θ-ΘΘ-Θ
95	6	18	------Θ------Θ-ΘΘ------ΘΘ---ΘΘΘΘ---------ΘΘ
94	22	76	----ΘΘ----------Θ----ΘΘΘ--ΘΘΘΘΘΘΘΘΘΘΘΘΘΘΘΘΘΘΘΘΘΘΘΘ-ΘΘΘΘΘΘΘ-ΘΘΘΘΘΘΘΘΘΘΘΘ

Subjects marked with this symbol ″ had been diabetic from the age of eight years or earlier, and had been under diabetic management either at this institution or elsewhere for a correspondingly greater period than indicated by the time limits of the study.

as much as one and one-half newly carious teeth or more per annum throughout the periods of observation. Three of these remained completely free from extension of decay for periods of two years or longer, and showed advance of decay at times of recognized departure from the prescribed regimen. The other 3 children showed noteworthy progression of caries throughout the course of study, with no significant periods of non-advance. These 3 subjects were so situated socio-economically that it was impossible for them even to approximate the pre-

protective effect has paralleled the demonstrable evidence of adherence to the prescribed dietary regimen.

One can dismiss as irrelevant certain characteristics of the subjects and of the imposed regimen. Evidently the diabetic state in itself offers no protection against tooth decay: during periods of non-control the subjects showed rates of advance which exceeded those estimated for supposedly healthy children of corresponding age (3). The status of the teeth cannot be attributed to the use of insulin,

because without exception insulin was used at all times by all of the subjects studied, and in amounts which show no correlation with the caries experience. None of the observations has led us to question the premise that the nature of the diet in itself was responsible for caries prevention. The dietary regimen for diabetic children was characterized by the use of liberal amounts of milk, eggs, meat, fresh and canned vegetables and fruits, and cod liver oil daily. Prior to the year 1934, about seventy-five per cent of the calories was supplied in the form of fat; since then carbohydrates (starches, vegetables and fruits) have supplied about half of the calories and fat about a third of the calories.

We have been unable to attribute the favorable effect of the dietary regimen to any single constituent or characteristic of the diet. McCollum suggested that the high-fat content was responsible (4). At the time he first made this suggestion diets high in fat were being employed. Since 1934, however, diabetic diets have contained no more fat than we recommend for the average normal child, yet the caries-protecting effect has not been lost.

Proponents of the chemico-parasitic theory of tooth decay have accepted the Iowa findings as evidence to support their belief that carbohydrate foods are the bête noire responsible for tooth decay. It is true that diets for diabetic children are low in their content of sugar, yet we have employed cereals and other starchy foods as sources of energy in liberal amounts with no evidence of adverse effect on the teeth. For an answer to the part which sugar limitation may play in the prevention of tooth decay, it is necessary for us to review the studies which have been made dealing with non-diabetic children who were observed for considerable periods of time while ingesting prescribed diets which included significant amounts of sugar.

OBSERVATIONS RELATING TO NON-DIABETIC CHILDREN

In an earlier report (1 b) we called attention to the arrest and non-progression of caries in children with celiac disease or chronic intestinal indigestion, who for years depended chiefly upon dextrose as a source of energy. At the time these children were first placed under therapeutic management, some of them had extensive and progressive caries, even though they were barely beyond the period of infancy. The prescribed diet consisted of skim milk, cottage cheese, egg white, orange and tomato juice, sieved vegetables and fruits, cod liver oil and lean meat. Its content of fat and starch was kept at a minimum. The content of protein, vitamins, minerals and calories was designedly maintained at an optimal level. In this respect, the diets for the children with celiac disease resembled those for the diabetic children; each diet proved to be effective in arresting and preventing tooth decay as long as the prescribed ingredients were taken regularly.

Another study has used children without disease as subjects. These children have been resident in the metabolism wards for periods of months, during which their retention of calcium, phosphorus and nitrogen has been studied under strictly controlled dietary regimens. The nature of the experimental diets has varied from one study to another, but in most instances the prescribed diets have met or have surpassed recognized standards relating to the level of intake of protein, the various essential vitamins and minerals, and energy content. These diets have not been restricted in their content of sugar or starches: sugar has been used on cereals and as a constituent of jellies, fruits and candies. Nevertheless these children have shown arrest of caries which has been similar to that observed in children under the diabetic dietary regimen. Nothing has led us to believe that the sugar in the diets has interfered with the protection against caries.

A few isolated observations have been made to test specifically the effect of large amounts of sugar on the susceptibility of the teeth to decay. Children who have remained in the hospital wards for periods of several months have been given diets which have included as much as eight ounces sugar daily, together with other foods designed to provide an optimal intake of protein, minerals, vitamins and energy equivalent. Throughout the period of observation, no extension of caries or development of new areas of decay has been detectable, even though sucrose and dextrose have supplied almost half the energy content of the diet.

Some subjects have been referred for study specifically because of their rampant caries. Supervised administration of the prescribed dietary has been sufficient in most of these to lead to arrest of caries. Certain exceptions have been studied in the metabolism ward to determine the reason for their difficulties. Whereas these studies have not been reported, it may be stated that evidence has been found to indicate that poor utilization of the ingested diet was responsible for their poor response; with therapy directed toward their poor utilization, their retentions approached normal and caries was arrested.

SUMMARY AND CONCLUSIONS

These studies offer evidence that tooth decay can be prevented or arrested through the use of diets which differ rather notably in some respects, but which in common are designed to meet optimal nutritional needs through foods suited to the subject's capacity for utilization. Tooth decay seems dependent on the nutritional state of the individual, and will respond to dietary measures. Such meas-

ures need not be directed toward the condition of the teeth in themselves; if the best interests of the individual as a whole are considered, the condition of the teeth will be safeguarded also.

From the standpoint of the nutritionist, the following syllogism seems apropos:

> Dental caries is highly prevalent in all socio-economic levels:
> Tooth decay can be prevented or avoided through improvement of the dietary:
> It follows that the prevalent current levels of child feeding are significantly deficient or faulty.

As students of nutrition, we do not need dental evidence to establish the prevalence of suboptimal feeding practices. This has been demonstrated through other avenues of investigation. Authorities have established through experimental studies the amounts of the various dietary factors needed for desirable nutrition. Recently these have been formulated by the Committee on Food and Nutrition of the National Research Council (5). If we accept such standards, the stated requisites can be expressed in terms of the nature and amount of specific common foodstuffs needed to meet them. When one studies the level of consumption of such key foods, he can gain information as to the prevalent dietary. Numerous studies of such nature have been made and reported during recent years. From them one can construct with fair accuracy the type of dietary in common use for child nutrition, making suitable allowances for geographic area and economic level. When this dietary is compared with the accepted standards of excellence, it is found to be suboptimal in its content of several protective foods—notably milk, vegetables, fruits, fish liver oil, and frequently meat and eggs. Expressed in terms of the protective factors which these foods can supply, deficiency is prevalent as regards calcium, vitamin D and C, probably protein, and frequently the vitamin B-complex; other deficiencies are less common.

The diet recommended by us for nutrition of the normal child meets the standards of the Committee on Food and Nutrition of the National Research Council; its use has been found effective in the control of tooth decay. It includes daily the specified amounts of the following foods: 1 quart milk; one or two eggs; two four-ounce servings succulent, leafy and root vegetables; two four-ounce servings fruit, one of which should be orange or other raw fruit (tomato may be used as a substitute); one serving meat, fish, fowl, or liver; one teaspoon cod liver oil; and supplementary foods such as potatoes, starches, bread and other cereal products, sweets and fats, in amounts sufficient to complete the caloric requirements for full activity. Such a diet supplies about half of the calories in the form of highly protective foods. The nature of the supplementary foods has not seemed important provided they are acceptable to the child and do not replace any of the more valuable, specified ingredients.

Those concerned with the profession of nutrition can do much to lessen the appalling incidence of tooth decay, through expressing the courage of their own convictions as to the need for improved standards of feeding both children and adults. They already are aware that improvement of dietaries is called for throughout the whole child population. Through the establishment of optimal states of nutrition, one may look for improvement in health and in performance which will reflect itself in various ways. One of these will be the avoidance of tooth decay. Even though the control of caries would in itself be sufficient as a goal, the other benefits derived, though possibly less tangible in nature, would equally justify the effort expended.

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Chronic Complainers

Soldiers, inmates of institutions, any regimented group, perpetually and noisily complain about the food regardless of its excellence.

—Furnas, C. C., and Furnas, S. M., Man, Bread and Destiny, p. 246, Baltimore: The Williams & Wilkins Company, 1937.

How to Build a Demonstration

JULIA KIENE

Home Economics Department, Westinghouse Electric & Manufacturing Company

THE object of a demonstration is to create a receptive attitude in the minds of individuals toward the product or principle being demonstrated. Therefore, any successful demonstration must have sales appeal; that is, the presentation must point out clearly the reasons why any person should buy the product, or accept the message which is being conveyed.

Sales appeal, however, should not be so forced that it will cause resistance in the minds of the listeners. Rather, the demonstration should be built around the product—creating buying interest by showing what the product will do. This is more than ever true in attempting to create interest in or "sell" health via nutrition through encouraging better food preparation. Peculiarly enough, this particular selling job cannot be forced on an audience.

It is the first few minutes of a demonstration which count, for it is during this period that the demonstrator wins the confidence of her audience. If she succeeds she can then easily hold their attention through a period of forty-five minutes or an hour, without any evidence of restlessness on the part of her hearers.

In helping homemakers to do a more intelligent job of feeding their families, we now are all faced with the most difficult type of demonstration. There are two basic reasons for this: (1) homemakers do not like to be questioned as to their ability to manage their own families; and (2) nutrition as a subject has never been presented in a very interesting manner. It seems difficult for technically-trained foods experts to reduce their scientific knowledge to an understandable, practical, and dramatic basis. Lectures alone may accomplish little good, but a dramatic demonstration can bring in converts by the dozens. That is how Billy Sunday put religion over.

To accomplish her objective, it is necessary for the demonstrator to observe the following:

(1) Have a surprise element in the opening paragraph.
(2) Have a thorough knowledge of the product or subject matter being demonstrated, which in this instance is *health*.
(3) Have a general knowledge of the homemaker's problems.
(4) Be able to express herself in terms a homemaker will understand.
(5) Have a sincere interest in the homemaker.
(6) Avoid a "know it all" attitude. The demonstrator must make herself felt as a part of the audience.
(7) Be absolutely honest.
(8) Have factual evidence in originally printed form to back up any statement made which might be questioned by the audience.
(9) Be prepared to meet any emergency which may arise, without becoming confused.
(10) Be dramatic.
(11) Have any charts or other illustrative material in order to avoid fumbling and searching. If food is to be used as part of the demonstration, have trays all set up in advance with every ingredient and utensil necessary for completion of the demonstration. Waste of time on non-essentials weakens the demonstration.
(12) Have a sparkling conclusion which briefly sums up all the points that have been made.

For the past twelve months, every demonstration we have given has been built around health. We feel that food is essential in putting over the health story, but we spend no time during the demonstration in explaining how the food is prepared. Our objective in these demonstrations is to stress the great loss in both vitamins and minerals when vegetables are over-cooked. Rather than calling it "over-cooking," we have chosen the word "fire-weary" in the belief that this phrase will call up an immediate mental picture of foods limp from too much cooking. However, it requires more than words to put this story over, so we have selected peas as the vegetable to demonstrate. On a tray we set up two cooking utensils: one with a tight-fitting lid, the other a glass utensil. In each utensil we place a pound of fresh peas. Also on the tray are a pitcher filled with water, a set of measuring spoons and a glass measuring cup. In the utensil with the tight-fitting lid, we put two tablespoons water, and in the glass utensil, one and one-half cups water. Both are placed on the range. The peas in the first utensil are cooked the "vitamized" way, by bringing to a quick steam, then reducing

the heat, and cooking on the lowest heat which will maintain steaming and obviate any violent boiling. The peas in the glass utensil are kept boiling rapidly during the same length of time required to cook the first peas. At the conclusion of the cooking period, dramatic proof of what happens when vegetables are over-cooked can be given the audience by placing both kettles of peas under the demonstration mirror, and by calling attention to the bright green color of those carefully cooked, in contrast to the wilted and broken condition of those which boiled away without any attention.

To give further proof of what happens when vegetables are over-cooked, we drain the water from the over-cooked peas into the glass measuring cup. The water is cloudy, filled with sediment and the amount is far more than can be suitably served as a part of the vegetables. On the other hand, very little liquid is left on the peas cooked the "vitamized" way, and all of it can be served. We know that probably ninety per cent of the homemakers present serve "fire-weary" vegetables to their families, and we have found this indirect means of urging them to change their methods effective, without having definitely said, "You do this."

The surprise element in a demonstration must of all things be timely, and something of keen and general interest to the audience. Last fall we selected a typical day's menu as served in Army camps as the surprise feature of our demonstration. This proved to be particularly popular, for as we had reasoned almost every woman in any audience either has a member of her family or someone she knows in an Army camp. Moreover, mothers do not want the government to do more for their children than they do, so in addition to the surprise element there was an implied or indirect challenge to the homemakers in the references to Army meals.

A demonstrator must not attempt to exhaust all the knowledge she has on a subject in one demonstration. If she does, she'll have everyone confused, including herself.

Above all things, the person giving the demonstration must understand a homemaker's problems, and realize that the average housewife is a busy individual with many things to do besides preparing three meals a day. Therefore, make simple, easily followed recommendations. Even though the information seems old and threadworn to the demonstrator, it will be new and interesting to the majority of the group listening.

Do not use technical terms. In telling the story of vitamins, make it seem simple. We can't expect homemakers glibly to call vitamins by name, for until recently they have been strangers. If the demonstration is going to accomplish the original objective of interesting women in better methods of food preparation, the story of vitamins must be humanly and simply told. Vitamins are friends of the entire family, and should be presented in a friendly manner.

Since there are many, however, who are extremely doubtful of the value of vitamins, it is advisable to have at hand the printed reference to any definite statement to be made during the demonstration. In practically every audience, there usually is at least one heckler, and if the statement can be read from an authoritative source, all hecklers are apt to be squelched immediately. We never give a demonstration without having our references available and we also have the page or pages from which the quotation was taken, immediately accessible.

Probably one of the smartest things a demonstrator can do is frankly to admit at least once during the demonstration that she doesn't know the answer, and throw the question back to the audience for answering. This bit of strategy seems to make the audience feel that the person on the platform is human, after all, and you thus are able to generate a kindly feeling and more retentive interest in what you have to say.

Above all, a demonstrator must never attempt any tricks on the platform. Everything that is done must be something the average housewife can do in her own home. Complete honesty in every statement, and in every cooking operation is essential.

If charts are used, and it is advisable to use them provided they are interesting, arrange them before the demonstration starts in the order in which they are to be shown. There is nothing which causes an audience to lose confidence in the demonstrator so quickly as to have her fumbling around trying to find the next thing she wishes to use. A successful demonstration must be completely organized before the meeting starts, or it will end on a note of confusion.

The young woman who has taken public speaking in college is indeed fortunate, for such training makes it much easier for her to add a touch of drama to the presentation, particularly now that we are attempting through example and precept to improve the dietary habits of the American family. Too many folks boast that they eat what they want when they want it, and any attempt to get them to change ingrained and faulty food habits is apt to meet with resistance unless the presentation is dramatic and forceful.

If there has to be a choice between a lecture-demonstrator who has a profound knowledge of her subject but has difficulty in presenting it, and one who knows less but can add a touch of drama to the presentation, the latter would do a much better job of selling "healthier" meals to an audience of which probably one-third are under-nourished.

Make the conclusion snappy and to the point, briefly summing up all the points which have been made. Don't leave any loose ends for the women to wonder about afterwards. A forceful conclusion leaves the audience wishing the meeting weren't over, and mentally vowing they will return the next time the same speaker is scheduled to give a demonstration.

Public Information Disseminated by Radio[1]

W. W. BAUER, M.D.[2]

FOR the purposes of this discussion let us be realistic, not to say hard-boiled about radio. Let us face the fact that the mere assignment of radio time does not guarantee an audience. Almost every radio listener has a choice of a number of stations at any time and will not listen to a program that does not interest him. Let us also divest ourselves of any idea that health in itself is so interesting a subject that it can be dealt with in a dull, routine and uninspired manner.

The melancholy fact is that the radio audience must be beguiled into listening to a health program. The only lay persons with a continuous and vital interest in health are the sick and their relatives, the hypochondriacs, and those with selfish interests to serve.

Health programs compete on the air with entertainment programs on which considerable money is spent and which cater rather keenly to the well-known interests of the majority of radio listeners. We self-styled intellectuals may find much material on the air banal and pointless, but that is of no significance as long as the so-called soap operas have their millions of listeners who follow the fictitious heroines and heroes faithfully from day to day and send in their post cards as evidence of their interest. Health programs also compete with the so-called health programs of high-powered psychologists who use health promises as bait to lure the unwary. We cannot with clear consciences follow in the footsteps of the diet faker who promises youth, attractiveness and sex appeal as the result of following his dietary recommendations. We can, however, with clear consciences adopt many of the techniques of the soap opera. Indeed, if we are to be successful broadcasters we must do so.

The first consideration is radio time, which we as health educators are for the most part unable to buy. We must therefore rely upon the so-called public service assignments of radio time which the radio stations make as a part of their contribution "to the public interest, convenience and necessity" and as a sort of building material sent on ahead for their mansions in the skies, otherwise known as renewals of licenses. While radio stations are expected to make such contributions, many of them are much more liberal than actual necessity requires and are generous, indeed, in aiding the production of successful programs concerned with health education and other public service fields. Radio time for public service, necessarily, is not the time which is most readily salable commercially. The best hours are admittedly between 7 and 10 p.m. and these are seldom available for public service programs. Morning and afternoon hours are desirable especially for programs directed primarily to women. The least desirable hours are those just before or after meal-times when many women are preparing meals or clearing them away. The bridge table, commonly regarded as radio's greatest competitor, probably plays little part in the lives of most American housewives to whom radio programs on nutrition are most likely to be directed. Sunday afternoon and evening are good times for programs, but Saturday afternoon and evening, when the thoughts of the radio listener turn to the dance band and the comedy program, are less desirable. Nevertheless, modern radio experience indicates that a program worth listening to will have listeners at almost any reasonable hour.

Frequency of programs depends upon the resources available for keeping them lively and interesting. Few health programs are worth broadcasting oftener than once a week. For the most part, fifteen minutes is long enough unless rather extensive resources can be drawn upon for dramatization and musical embellishment. When a time has been assigned it is important that it shall not be changed frequently since radio listeners are slow to follow even a favorite program to a new spot on the dial or a new place in the time schedule.

The simplest kind of program is the straight talk, where the speaker is introduced by the radio announcer, talks for 13 minutes and 30 seconds and is

[1] Presented before the American Dietetic Association, St. Louis, October 22, 1941.

[2] Director, Bureau of Health Education, and Radio Programs, and Associate Editor, *Hygeia*, American Medical Association, Chicago.

then politely dismissed by the announcer just in time for the next program feature. This is the weakest form of radio presentation unless it is exceptionally well done. Radio talks on foreign affairs or domestic politics derive their audience not only because of the excellence of their presentation but because of the vital interest they inspire due to the impact of events upon our everyday living. The broadcaster of a health talk does not have such an advantage. Only by superior presentation, such as that of Dr. Howard W. Haggard in his famous "Devils, Drugs and Doctors" series some years ago, can the radio health talk be lifted above mediocrity. Since in many situations it is the only form of radio presentation which is practicable, it should be made as interesting as possible.

In preparing a radio health talk, the first consideration is the audience. Applied specifically to the field of dietetics, this means that the more complicated nutritional concepts, especially experimental work, must be presented to the listener from an angle which is of direct and definitely practical interest to him. The radio talk should be enlivened by human interest material, such as actual case stories. The broadcaster should not be afraid of a touch of humor. There should not be so much material in the talk that it cannot be received, digested and assimilated by the relatively careless listener. For this reason and because radio listeners may tune in late and may tune out early, a radio talk should be built about one central idea which should be introduced at least three times in the course of the broadcast. A good formula for a radio talk is as follows: "First, tell them what you are going to talk about, then talk about it, and then tell them what you have been talking about. Include in every radio talk a laugh, a tear, and an idea."

Presentation of the radio talk is as important as its preparation. It should be timed accurately. Many broadcasters find it useful to mark the minutes on the margin, and thus are able to check their speed as they go along. Enunciation must be clear, without affectations and without accents unfamiliar in the locality. Radio technique is conversational, not oratorical. The voice should be low, but not without shading and modulation. Most radio listeners are sitting by the radio alone or with one or two companions and therefore should be addressed as if they were sitting by your side, not as if they were across the footlights.

The second form of presentation is the interview or one of its modifications. Modifications of the interview include the round-table, the symposium, the forum, the radio debate, and the quiz program. The simplest form of interview is a question and answer interchange between the interviewer and the person who presumably has all the answers. For the most part, this kind of presentation is likely to be weak because it sounds forced or unnatural. Most interviews look in script, and sound on the air as if they were talks which had been chopped up into more or less random paragraphs with supposedly appropriate questions interspersed. This results in a lopsided presentation consisting of short questions and lengthy, pompous answers quite unlike any normal conversation. Moreover, the combination of all-wise answer man and totally ignorant stooge is artificial and undesirable. A good interview consists of the conversational interchange of quick questions, snappy answers and equally snappy comebacks from the questioner before he puts the next question. It requires rehearsal. The round-table includes more than two voices and is in the nature of a discussion rather than simply questions and answers. In a forum or symposium, there are usually several more or less lengthy presentations followed by opportunities for questions and discussion. In the quiz program various formulas can be used, as exemplified by "Information Please"; "Truth or Consequences"; "Double or Nothing"; "Professor Quiz"; or "Battle of the Sexes." All of these presentations require well-written scripts, good production and skilled presentation. Inherently they are better presentation forms than the radio talk, but if not well done they can be far less effective.

The third form of presentation is the drama. This may be used to occupy the entire available radio time except opening and closing announcements, or it may be faded into a talk or interview to make the presentation of a highlight or an illustrative episode more graphic. Merely putting two or three voices into a script does not constitute drama. Drama implies conflict, suspense and delineation of character, with a climax and a satisfactory solution. Many situations in the realm of health, including dietetics, can be dramatized effectively. There is much more fun for the radio listener in hearing Junior throw his plate of broccoli on the kitchen floor, with appropriate crashings and smashings and well-portrayed maternal indignation than in merely being told that "some children do not like certain unusual flavors, such as broccoli." Because of this interest in drama there will be more listeners and they will be more interested, but also because of this same factor they may become more interested in the drama than in the lesson. It is important, therefore, that entertainment not be emphasized more than is necessary to attract the interest of the listener; it should not be so engrossing that the fundamental message is obscured. While drama is undoubtedly the strongest form of presentation, it is also the most undesirable when badly done. A good radio health talk is infinitely to be preferred to a "corny" presentation of a radio drama.

Because of the varying, yet inherent characteristics of the above-mentioned radio presentations, the American Medical Association uses all three. It recommends radio talks for special occasions and

for routine use in local programs where expert broadcasters are not available. It recommends the interview and the round-table in circumstances where sufficient time can be devoted to preparation and presentation; and it has used the drama in its nation-wide network programs where facilities for professional production are available.

It must not be supposed that the radio drama can be used only where large budgets are available. It is true that it should be professionally written and adequately produced. Professionally written scripts are available. Cooperative arrangements with Little Theater groups often make possible excellent production, especially if there is a cooperative radio station through which appropriate musical accompaniment and sound effects can be arranged. Some of the state medical societies and those of the larger counties have used the health dramatization successfully.

Emphasis should be placed on the importance of previous preparation for radio appearances. In general, it is reasonable to assume that every minute on the air requires not less than 10 minutes' preparation. In the case of the plain radio talk, this time of preparation may include the writing of the talk, but in the case of interviews or dramas, it represents rehearsal time exclusive of time spent in preparing the script. Going on the air "cold" is practically a sure way to invite failure.

Radio vocabulary should be simple and should be confined strictly to familiar words except where it is absolutely necessary to use an unfamiliar word, in which case the word so used should be explained at least twice during the broadcast. Certain words with unpleasant connotations are not used on the air. Persons accustomed to scientific frankness in the use of language are prone to regard these radio vocabulary taboos as ridiculous, but they will be well advised when in the radio studios to do as the broadcasters do. It is almost always possible to find a more acceptable way of saying the same thing.

Radio stations may be held responsible for whatever they permit to be broadcast. It is proper to take issue with a radio station in relation to what is suitable for broadcasting and what is not, only when an effort is being made to modify a health education program in respect to essential facts or policies. It may often be worth while to heed the radio program director's advice and reach an objective by making statements in such a way that the radio listener will grasp the idea even though it is not put into actual words.

In any kind of radio presentation direct controversy should be avoided. If quacks or fakers are attacked they may demand equal and equally desirable radio time to reply. In such a battle of words the advantage is all with the quack against the scientist because the quack has no inhibitions and no conscience. It is simply foolhardy to invite an unequal contest especially since the quack almost always manages to appear as a martyr and thus enlists public sympathy. It is much better to keep on doggedly telling the truth in the hope that it will sooner or later catch up with the false.

Radio, valuable as it is, is not an isolated medium. Your radio program will lose much of its effectiveness if it is expected to stand alone. It should be supplemented by and integrated with other health education activities, such as exhibits, newspaper publicity, billboards, placards, pamphlets, correspondence and word-of-mouth contacts. Wisely and judiciously used, radio offers one of the best media for reaching large numbers of persons at a minimum of expense.

UNITING TO COMBAT WASTE

Now that this nation is confronted with the greatest crisis in its history, everyone agrees that each individual citizen must work harder than he has ever worked before. Everyone agrees that our American way of life must be preserved and defended at all hazards. But what are we doing about it? Our great abundance has made us the most wasteful people in the world and we rationalize this under the euphonistic term, "high standard of living." Even Pearl Harbor has not shattered our complacency sufficiently to make us realize that we cannot waste and win. Pearl Harbor has given us unity of intention, but will we have to wait for an invasion before we accomplish unity of effort and action?—*Editorials, Hospitals, 16: 70, 1942.*

Presenting the Community Nutrition Program[1]

HUGH R. LEAVELL, M.D., Dr.P.H.
Department of Public Health, Louisville, Kentucky

NO ONE can appreciate better than I how difficult it is for a health officer to consider the "Community Nutrition Program" before a group of experts in nutrition. On the other hand, perhaps the problem before us is not so very different from others with which public health people have coped from time to time. The control of many communicable diseases has been achieved through public health education. It is likely that the job of educating the public in nutrition may be attacked successfully by employing the principles of health education built up by trial and error in the earlier campaigns against disease.

We may consider our task under four principal heads. First, what are we trying to do? Second, what people are we trying to reach? Third, who is to do the job? Finally, how is it to be done? We might take as a text part of the third verse of the eighth chapter of Deuteronomy, "Know that man doth not live by bread only." This interpretation of the quotation, of course, is a perversion of the scriptural meaning but at least it emphasizes the importance of a varied diet for the people, as well as the need for a varied method of presenting the problem to the community.

WHAT ARE WE TRYING TO DO?

We might summarize our objective by saying we are trying to accomplish the aims set forth by the National Nutrition Conference. At this Conference, all interested groups contributed to the final summary and to the recommendations sent to President Roosevelt. We want to make Americans stronger through the application of well-established nutrition principles. May I emphasize the phrase, "well-established." Any facts which we are to present to the public should be based not only on laboratory experiment but also on successful application to human beings. We must be sure of our statements. In our educational campaign research should be restricted to evaluation of the teaching methods used. Even if our educational activities are confined to what we actually know, there is still an enormous amount of information on which to base our campaign. Just think how much more we have to tell people than the soap manufacturers who regale the public daily throughout the morning with "dramas" and glowing descriptions of the virtues of various types of cleansing agents.

In planning our objective, we should certainly consider some of the things we wish to avoid. At the top of the list might be placed self-seeking persons (or agencies) who value their own ideas more highly than they do the benefit of the public. Next, to be avoided as the plague, are food fads and cranks. There simply is no place for them in the job we are trying to do. And though we may expect to make some mistakes if our campaign is to be lively and active, on the other hand we should try to avoid such errors as may cripple the whole future long-range program. National defense is our immediate goal, and it gives us a most useful battle cry. However, we must look forward to a continuing need for nutrition education after the emergency passes.

May I enumerate what to me seem to be some of the most important principles we want to teach? I believe we can agree on them without much question.

First, *natural foods should be used where possible.* Consumer demand and commercial competition have resulted in refinement of many of our foods to the extent that many natural food elements are lost. Second, *wider use of inexpensive foods of high nutritive value is indicated.* Skim milk, peanuts, soy beans, and frozen eggs are among the foods in this classification. As Dr. Morris Fishbein, editor of the *Journal* of the American Medical Association, pointed out at the National Nutrition Conference, we need to have more appealing names for these foods. Persons drinking skim milk quite naturally feel that they are using an inferior product, and you may be sure that no national advertiser would spend thousands of dollars for radio time to sell a product with a name as prosaic as skim milk. Third, *nutritive value*

[1] Presented before the American Dietetic Association, St. Louis, October 23, 1941.

should be preserved in cooking and processing. Fourth, *vitamin concentrates are too expensive for use except on the basis of a physician's prescription in special cases.* Fifth, *the proportion of calories taken in the form of protective foods must be increased.* There must be a wider use of milk and milk products, eggs, vegetables, fruits, lean meats and sea-foods. At the Nutrition Conference Vice-President Wallace pointed out that the farmer must work five times as hard to produce a pound of dry matter in protective foods as he would to produce a similar amount in cotton, wheat or tobacco. If more of these protective foods are to be available, we shall have to pay the farmer more for his additional labor.

WHAT PEOPLE ARE WE TRYING TO REACH?

What are they like? Who are they? The answer, of course, is all kinds of people, since everyone eats, and everyone has ideas and prejudices about food based on childhood experiences, environment, racial stock, the region in which he lives and his income. It is important for us to be sure we take all these factors into account, and convince all types of people that nutrition education is really something they need. We must remember with Federal Security Administrator McNutt that "eating should be fun"; that "food should not lose its gastronomic gusto by being distilled through the coils of an expert"; and in the words of Secretary of Labor Perkins, that "protective foods must be made to taste as good as pie."

We shall then have to study the local community and find out what its particular needs are before we are ready to inaugurate our campaign. This means a survey; it may be based on previous knowledge and experience, and may in large part be more or less passively done. If we begin with a full realization of what we are trying to do, it is likely to be a more useful and revealing survey. In any case, we must have it. Possibly it will involve the use of polls of public opinion and public information. What do people already know about this nutrition problem? What fixed ideas do they have that we must try to change in bringing about the desired end? How far can we expect to go with our educational program in the face of the knowledge that income plays such an enormous part in determining the content of the family market basket? Sherman says that both education and income are important in determining what a family eats; but that we can do a great deal in the educational field in spite of low income.

WHO IS TO DO THE JOB?

First, we need a planning committee to be constantly in the background studying the situation, formulating policies and plans, and helping to provide the highly essential sinews of war in the form of financial support. The planning committee may advantageously consist of both professional and lay representatives. The professional representatives will include members of the medical and allied professions, dentists, nurses, particularly those in public health work, hospital administrators, and teachers of medicine, dentistry and nursing. Social workers and school teachers will also be in the professional ranks, and at the very forefront of the work will be those in the dietary field. These professional groups must carry the brunt of the work and, in a rather large measure, will constitute a productive field for concentrated effort in the community campaign. A great bulk of the newer knowledge of nutrition has only recently become available. Professional workers who had their training even a few years ago, except in unusual cases, are not fully aware of the nutrition problem as it exists today. There is a pressing need for refresher courses; for nutrition programs at meetings of professional societies; and particularly for instruction in methods of health education.

Because of the limited number of professional workers available, and because participation begets interest, we shall need to recruit lay people for our nutrition campaign. If we separate the general public into the various clubs and organizations, schools, industrial workers, and so on, we find our problem less overwhelming than would otherwise be the case. In recruiting lay helpers, we must remember that a great many may consider themselves more or less as experts in the food field. By training courses for leaders, we may be able to dispel this illusion where it exists and create a corps of really well-informed people who may be depended upon to help the work along.

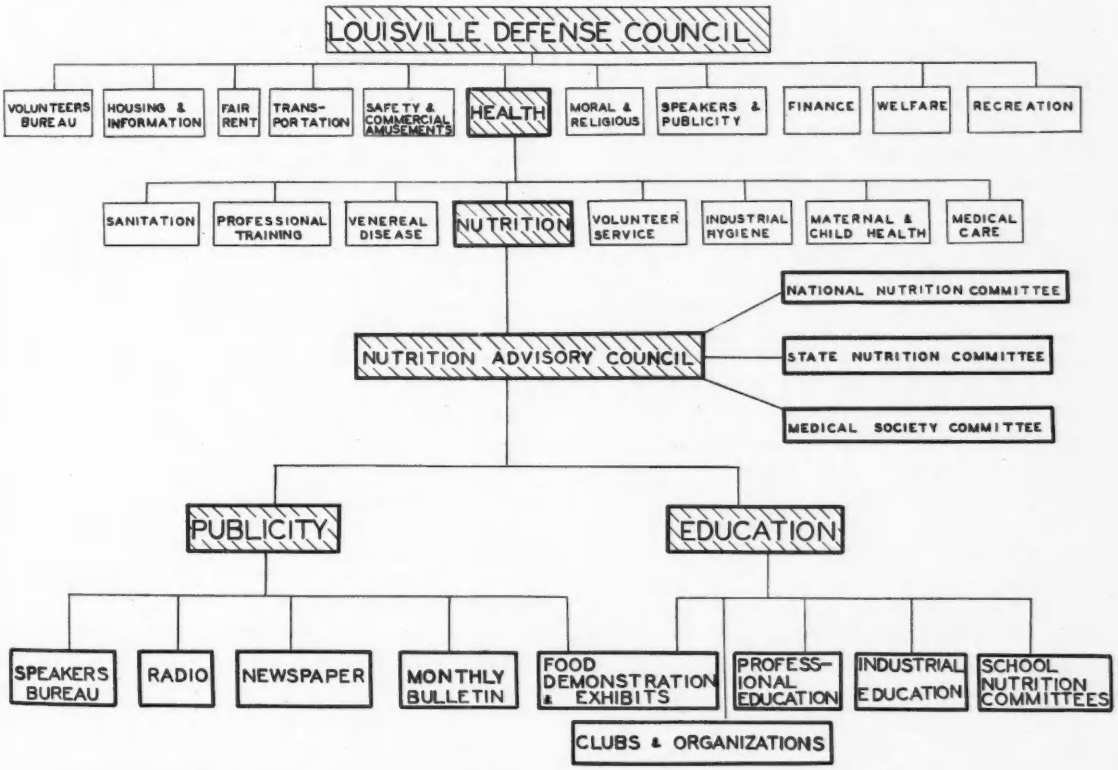
An organization chart of the Defense Nutrition Program, as it has been set up in Louisville, may be of interest as we consider who is to do the job. The Louisville Defense Council[2] is made up of a number of committees; one of which is the Committee on Health. This committee has eight subcommittees, one of them a Committee on Nutrition. The chairmen of these eight subcommittees meet at least monthly to discuss the various subcommittee programs and, more particularly, subjects of general interest in health planning for defense. Each subcommittee chairman appoints representatives of various community agencies working in a particular field of activity—nutrition, sanitation, industrial hygiene, etc. Under this system there is a place somewhere in the organization to which everyone working on defense can go for guidance and coordination.

The chairman of the nutrition subcommittee is also chairman of a Nutrition Advisory Council composed of twenty or thirty people acting as the

[2] Since this paper was written, five major divisions have been set up: Health, Safety, Works, Welfare and Volunteers. Organization of the Health Division is essentially as shown in the diagram.

planning group for the community nutrition program. National and state nutrition committees and a committee especially appointed from the County Medical Society are available for technical help. A subchairman of publicity is responsible for the speakers' bureau, radio programs, newspaper articles, and editing of the monthly bulletins sent to leaders. The publicity chairman is jointly responsible with the education chairman for food demonstrations and exhibits. The education chairman is also charged with work among professional people, industrial groups, clubs and organizations, and with school nutrition committees. It is quite likely that as the work goes on other groups will require representation in the organizational set-up.

ORGANIZATION CHART OF LOUISVILLE DEFENSE NUTRITION PROGRAM



HOW IS OUR JOB TO BE DONE?

Hiscock, in *Ways to Community Health Education*, makes the following statement about the tools or instruments which may be available: "Whether the health information to be disseminated is general in scope or pointed toward a specific objective (such as our nutrition campaign) the tools at the disposal of the health educator are essentially the same. They include the spoken word, printed matter, exhibits, motion pictures, and the radio. Of these, the spoken word in individual or group contact is the most productive." He further says, "All publicity must give the same advice—must be in terms familiar to the audience." It is the responsibility of the planning committee to see that all workers give essentially the same instruction without hampering their own initiative and ingenuity.

Whatever tools we use must be handled with skill. If at all possible, we should have leaders trained in the principles and practice of health education Slipshod methods are no longer acceptable to a public accustomed to all forms of modern advertising.

If the radio is to be used, a series should be planned for a regular time, if it can possibly be arranged, as a single isolated broadcast, in general, is ineffective. The script should be planned for the type of audience it is expected to reach: morning and afternoon hours are likely to have an audience of women; lunch, dinner-time and evening hours may reach the general population. Well-executed dramatic programs are most effective and unless there is an unusual story to tell, fifteen minutes is long enough for most radio

programs. The sponsoring agency should be one which the public is accustomed to regard as authoritative.

Our exhibits can teach only the simplest of stories, if we expect them to catch and hold the interest of the public. Pictures tell stories better than charts but in certain cases charts may be useful. They must be attractive and simple and the lettering well done. The labels must be so simple that even the casual observer can tell what the chart is supposed to mean without an explanation. When pictures are used, they must be good enough to meet standards the public has been taught to expect. Models and unusual colors are useful in exhibits but a point of even greater value is movement, especially movement initiated by the spectator. If something moves when he pulls a lever or pushes a button, his attention is assured. Actual food demonstrations, of course, are of primary importance. Fortunately, we need not use abstract material in teaching nutrition. Our materials are familiar to all and we need only to present them in some new way to attract notice.

If we go into the field of motion pictures, and if possible we should by all means do this, our movies must be technically good and up to date; the general public is likely to expect color; and sound, of course, is most helpful. The color-sound film, "Proof of the Pudding," produced by the Metropolitan Life Insurance Company and the U. S. Public Health Service, is excellent and already familiar to many of you. Film strips or "Kodachrome" slides may be appropriate to use with talks to small groups. Many amateurs are able to produce very acceptable "Kodachrome" slides with relatively inexpensive cameras.

We shall need some printed matter to tie down points that have been made in personal contacts and through exhibits. Printed material must have character and appeal if it is to be read. Probably only the larger communities will be able to develop a great deal of printed material, but in smaller places material prepared by many of the national organizations will be extremely useful; notable among such material are the very appealing and technically accurate charts, posters and pamphlets distributed by the National Dairy Council. Newspapers, obviously, are important means of education. Syndicated articles on nutrition may not always tell the story just as we would like to have it told, but their routine appearance in newspapers shows the editors consider nutrition interesting to the public. News stories and feature articles of local interest will doubtless be more effective in our campaign.

Hiscock gives some valuable advice about the use of the spoken word that may be helpful to those who experience difficulty in addressing groups of people. He says, "Some of the cardinal points to remember are that clear thinking always precedes clear speaking, that two or three major points are all the average listener can absorb at one time, and that to secure sympathetic attention those facts must be dovetailed into the listener's background and interest. Moreover, any action desired by the speaker must be possible of attainment and acceptable to the audience, and must be clearly explained. Sincerity probably counts more heavily than any other quality in a speaker, and if this is combined with enthusiasm, success is pretty well assured."

If Hiscock's ideas about enthusiasm and sincerity are correct, my discussion here today should have been successful. Certainly my subject is one about which it is easy to become enthusiastic and its importance, at the present time, is surely sufficient to make all concerned sincerely interested in our work.

In planning our community nutrition program, we must consider the four points which have been discussed: namely, What are we trying to do? What people are we trying to reach? Who is to do the job? What tools are available to work with? If we will keep these points in mind, we should have no insuperable obstacles to success. And since the government has not yet requested that we conserve our energy, we can go ahead under full steam.

Jack Spratt was awful fat,
His wife was thin as plaster,
They took a course in Dieting,
And lived happily ever after.

—*Funny Bone, August, 1941.*

Jack Spratt was awful fat,
His wife was thin as plaster,
They took a course in Dieting
Now he's wished he never ast her!

—*Helen G. Campbell, February, 1942.*

Why Enriched Bread?

ROBERT R. WILLIAMS, Sc.D.,[1]
and RUSSELL M. WILDER, M.D.[2]

THIS war will mean more work for everyone. Industry is being speeded up, and more men and women will work in factories. Shortage of labor-saving appliances in the home will bring greater expenditure of human energy in household tasks. Shortage of automobiles means more walking. Harder work, longer hours and increased physical effort create the demand for more food as fuel for the human machine. However, costs of living rise in war and people turn to inexpensive foods for extra food requirements—more flour, more bread. Unless bread and flour are enriched this will create more hidden hunger than has been found before, and danger to health and to the spirit needed to win this war.

The Russian army is fed whole grain. Thus far it is the only army to match successfully the whole-grain eating army of the Nazis. The endurance of the Russian citizen equals the vigor of the Russian soldier. The Russian people eating whole-grain bread receive important nutrients denied to people who depend on ordinary white flour for their bread.

The major defects of many diets in America are (1) insufficiency of thiamin (vitamin B_1) and niacin (the new official synonym for nicotinic acid), (2) insufficiency of ascorbic acid (vitamin C), and (3) insufficiency of calcium. The last two, as well as other defects such as insufficiency of vitamin A, are certainly correctable by education directed at increasing consumption of fruits, vegetables and dairy products—not so the first defect, as will be explained.

The most important source of thiamin among the foods consumed in amounts large enough to matter is wheat. A first result of deficiency of thiamin is loss of courage and the will to do or die. Insufficiency of this vitamin in many diets comes mostly from use of ordinary white flour and its products. Therefore it is extremely urgent that thiamin be put back into flour and bread *at once*. The argument applies with equal force to niacin. There is no evidence that it applies with similar force to other vitamins in wheat, as will also be explained.

Most people simply cannot be persuaded to eat whole wheat. Because of the over-refinement of white flour, phýsicians for a hundred years have urged the use of whole wheat bread. In spite of the doctor's advice, in spite of similar teaching by nutritionists, people continue to refuse to eat the dark breads recommended. Why? Some persons think the millers and the bakers are responsible. They say that people would eat whole wheat or undermilled dark bread and use whole wheat flour in their cooking if the millers and the bakers would provide such products. Nothing could be further from the truth. Whole or partly whole wheat breads can be bought in almost every bakery. The millers have every commercial reason for wishing to sell the whole of their grain as flour if they could do so. The bakers, we have learned, make whatever the public wants. Wheat farmers have a motive for promoting the continued use of white flour as nearly a third more wheat is required to make a barrel of white flour than one of whole wheat flour. However, it is not apparent that their voices have been influential in this matter. Repeated efforts have been made and millions of dollars have been spent by the milling and baking industries to popularize dark breads; all without success. We have investigated and found that almost every large baking concern has among its officers some man who has had his fingers burned in an attempt to promote the sale of whole wheat bread or like breads. Yet today less than two per cent of all the flour sold is whole wheat flour. The widespread efforts to get people to eat more whole wheat bread have failed, because the public prefers the color, texture and flavor of white bread.

Those who say they like whole wheat bread are mostly persons in silk-stocking classes who get ample

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[2] Head of Section (Nutrition), Mayo Clinic; Professor and Chief of Department of Medicine, Mayo Foundation, Rochester, Minnesota; Past-chairman, Committee on Food and Nutrition, National Research Council.

supplies of other foods and eat little bread. Even they will find, if they investigate, that what they like usually is not whole wheat at all, but bread made of a mixture of white and whole wheat flours, which is often very much less than half whole wheat. However, half whole wheat is not enough. Such bread does not provide enough of certain vitamins that ought to go with bread. The vitamins, thiamin and niacin, are needed to assimilate a starchy food like bread. Without them, poisonous products are formed within the body by incomplete combustion of this food. The people who depend on bread for food—craftsmen, pick-and-shovel men, farm hands, coal miners, janitors, and their wives, people who eat from half a pound to a pound of bread a day, those who need the vitamins of wheat the most, object to whole wheat bread as steady ration. For them especially, enriched bread is important.

Popular resistance is not encountered by enriched bread. Enriched flour is like white flour in baking qualities and enriched bread is like white bread in appearance, taste and texture. They are made by adding the vitamins thiamin, niacin and iron to white flour or to the dough of which the bread is made, thereby restoring the thiamin, niacin and iron lost by the flour in its milling. The addition to the dough may be accomplished by use of yeast high in thiamin. Addition to flour or dough of vitamins other than thiamin and niacin is less important. Not nearly so much of these other vitamins is lost in milling and less of them is needed to assimilate the starch. Other foods provide these vitamins more abundantly, and furthermore, much white bread is made with milk, which means the addition of certain other vitamins.

In contrast to the poor acceptance by consumers of whole wheat bread, our investigation shows that about forty per cent of all the family flour on the market and more than a third of all baker's bread has been enriched. We owe this fine achievement mainly to the millers and the bakers, who have gone ahead with little help thus to improve the nutritive quality of white bread. They have done this in the interest of the public health. They began to make enriched bread and flour in February 1941, at the time of a pronouncement on the subject by the Committee on Food and Nutrition of the National Research Council. The committee is a body of scientists and physicians serving as advisers to the government in the national emergency.

But forty per cent of all the flour and a third of all white bread is not enough to have enriched. The low-priced flours on the market are not enriched, and it is these flours that are eaten by people whose diets most need improving. *All flour and all white baker's bread* should be enriched. Once this is done the benefits will automatically flow to everybody, to those indifferent and careless about their diets, as well as to the thoughtful and progressive. However, the millers and the bakers cannot do this job alone. They must have popular support. Demand must be created. Purchasers must *ask* for enriched flour and enriched bread. Enriching is not required by the government. There is no law making it compulsory, and consumer demand is necessary to limit the unfair competition of the few less public-minded bakers and millers who are not enriching bread and flour now. Producers should be made to feel that if they neglect to do this they will handicap the sale of their products.

Purchasers of bread and flour should insist on seeing the word *enriched* printed on the flour sack and on the wrapper of the loaf of bread. The government can protect them in their purchases only when the word enriched is printed on the labels. Regulations assure that a bread or flour carrying such a label contains prescribed amounts of vitamins and iron.

So urgent is the need for improving the nutrient quality of white bread and flour that twenty-one of the leading teachers of medicine in this country have issued statements endorsing enriched white bread and flour. These statements follow. Read what these physicians say—then spread the word around.

Esmond R. Long, M.D., Director of the Henry Phipps Institute, and Professor of Pathology, University of Pennsylvania, writes:

> I wish to endorse most strongly the recommendations of the Committee on Food and Nutrition of the National Research Council that measures be taken to ensure flour and white bread of adequate vitamin content for the health of the American public. It has been said that in the long run nutrition will win the war. Every effort should be made to promote nutrition in this country and thereby raise the stamina of the American people to the highest level. Bread is one of the principal foods used by everybody. I am certain that enrichment of white flour and bread with appropriate vitamins will be reflected in an improvement in national health.

Warfield T. Longcope, M.D., Professor of Medicine, Johns Hopkins Medical School, and Physician-in-Chief, The Johns Hopkins Hospital, Baltimore, says:

> It is my well-considered opinion that the milling and baking industries are rendering a service of importance to the public in following the recommendation of the Committee on Food and Nutrition of the National Research Council which provides for a nutritionally better white bread and flour. The general use of an enriched flour and enriched bread in preference to the unenriched white bread and flour of the past should be urged in the interest of public health.

Walter T. Palmer, M.D., Bard Professor of Medicine, Columbia University, and Director of Medical

Service, Presbyterian Hospital, New York, has this to say:

The recommendation of the Committee on Food and Nutrition of the National Research Council, as it concerns the improvement in nutritional value of white bread and white flour, is one of large social significance and should receive the support of scientific bodies and the public.

O. H. Perry Pepper, M. D., Professor of Medicine, University of Pennsylvania, writes:

The facts prove that there are a number of definite inadequacies in the American dietary in many parts of this country. These inadequacies may, and probably will, tend to increase during the period of the national emergency. Any steps which can be taken to assure every citizen a proper, constant intake of the several vitamins will be a step toward improving the health of the population and therefore will be a help in national defense. I regard the enrichment of bread with thiamin, niacin and iron, as recommended by the Committee on Food and Nutrition of the National Research Council, as a step in the right direction.

J. H. Means, M.D., Jackson Professor of Clinical Medicine, Harvard Medical School, and Chief of Medical Service, Massachusetts General Hospital, Boston, says:

The important thing for the public to realize about enriched flour and bread is that they are not to be looked upon as medicines to be used in disease, but merely as adequate food staples for the preservation of health. Unenriched white flour is not an adequate food staple. To satisfy the people's demand for a beautifully smooth white flour or bread, millers long ago were forced to devise a process of refining, which of necessity reduced the nutritive value of the product. Restoration to the flour or bread made from it of certain nutritive values of the original wheat is what is accomplished by this process of "enrichment." The public is well advised to use no other white flour or bread than the so-called enriched varieties.

From New York, Thomas T. Mackie, M.D., Assistant Clinical Professor of Medicine, Columbia University, and Attending Physician, The Roosevelt Hospital, writes:

It has been amply proved that certain important nutritional elements contained in unmilled grain are essential to optimal health. These elements are definitely deficient in the average American dietary. In view of the increased demands—physical and nervous—which will be made upon the entire population of the country, especially in time of war, augmenting the supply of these food factors becomes a matter of great public health importance. These substances are supplied by enriched bread and enriched flours which should be used by all individuals in preference to unenriched white bread and flour which are almost entirely lacking in them.

James S. McLester, M.D., Professor of Medicine, University of Alabama, believes that:

The strength and vigor and stability of a people depend in no small measure on the food they eat. If, instead of eating bread made from plain white flour, the American people are encouraged by their physicians to adopt a widespread use of enriched flour, then their possession of these qualities will be more nearly assured and their sense of well-being materially increased. Appreciable benefits will accrue.

P. C. Jeans, M.D., Professor of Pediatrics, State University of Iowa, concludes that:

Preference for enriched white flour or bread over plain white flour or bread is supported by extensive and authoritative evidence and opinion. It is believed that the use of enriched flour and bread will improve nutrition in important ways. All users of white flour and bread will benefit from the enrichment, though the greatest benefit will accrue to those who are users of relatively large amounts of these foods; it is the people of this group who need the enrichment most. The enrichment program deserves universal support.

N. C. Gilbert, M.D., Chairman, Department of Internal Medicine, Northwestern University, and Chairman, Editorial Board, *Archives of Internal Medicine*, says:

We, all of us, know how very essential vitamins are to our health and well-being, and even to life itself. Many of us are taking additional vitamins daily in the form of tablets or capsules, or some liquid preparation. But at the same time we persist in using bread made with flour from which the most important of these vitamins have been removed. The Committee on Food and Nutrition of the National Research Council in Washington has asked the millers of white flour to make available to the public a white flour to which certain vitamins have been restored, in known and adequate quantities, and they have asked the bakers to use this flour. Bread made with this flour is greatly superior from a nutritional standpoint, and has the same baking qualities and the same taste. At this time of especial stress, it is very much to the advantage of the American public to avail itself of the opportunity to use this bread.

Wm. J. Kerr, M.D., Professor of Medicine, University of California Medical School, and Physician-in-Chief, University of California Hospital, agrees that:

The Committee on Food and Nutrition of the National Research Council has wisely pointed out the need for improvements in the average American diet. Bread is one of our basic foods and unless the flour used in its preparation is enriched, we shall continue to suffer from the lack of essential nutritional factors. The millers and bakers generally are rendering distinguished service in providing enriched flour and bread which is not only nutritious but also attractive and delicious. The health of our citizens is one of our most valuable national assets. If our needs for enriched bread were great in peacetime, they are much greater now that we are faced with a long, exhausting war.

Norman Jolliffe, M.D., Chief of the Medical Service of the Psychiatric Division, Bellevue Hospital, and Associate Professor of Medicine, New York University College of Medicine, New York, states that:

Analysis of the food habits and of the nutritional status of large groups of the American people has shown a picture so unsatisfactory that it is a national disgrace in peacetime and a national danger in wartime. The Committee on Food and Nutrition of the National Research Council, in recommending enriched white flour and bread, and the

millers and bakers, in immediately making these products available, are performing a service of great significance toward immediately improving the nutrition of the American people, thus enhancing the strength of America in our total victory program.

John B. Youmans, M.D., Associate Professor of Medicine and Director of Postgraduate Instruction, Vanderbilt University Medical School, writes:

The milling and baking industries are to be commended for making freely available to the American public the nutritionally superior enriched white flour and bread recommended by the Committee on Food and Nutrition of the National Research Council. By their whole-hearted cooperation and unselfish efforts at this time of urgent need, these industries have made an important contribution toward improvement of the public health.

From California, Dwight L. Wilbur, M.D., Associate Clinical Professor of Medicine, Stanford University School of Medicine, writes:

In these days of crisis it is essential that scientific knowledge be applied in all those activities in which it is useful. The Committee on Food and Nutrition of the National Research Council and the Council on Foods and Nutrition of the American Medical Association have wisely emphasized the urgent need for the widespread use of white flour and bread enriched with certain vitamins and minerals in place of plain, unenriched white flour and bread. The need for this enrichment is a very urgent one if scientifically acceptable standards of nutrition are to be maintained in this country. The milling and baking industries are performing a service of great significance in public health in making available to the American public such a nutritionally better enriched white bread and white flour.

Reginald Fitz, M.D., Lecturer on the History of Medicine, Harvard Medical School, states:

I believe that the milling and baking industries of this country are performing a social service of great importance in following the recommendation of the Committee on Food and Nutrition of the National Research Council to make available to the American public a white bread and white flour which are better for the general nutrition of the country than the unenriched white bread and flour of the past. The interest of the public health demands the use of enriched flour and enriched bread at a time when the state of nutrition of the country may be a matter of vital significance.

Tom D. Spies, M.D., Associate Professor of Medicine, University of Cincinnati College of Medicine, and Director, Nutrition Clinic, Hillman Hospital, Birmingham, Alabama, believes that:

In this crisis our responsibility as physicians makes it imperative that we see that scientific knowledge bearing on public health is put to work so as to make us a stronger and more vigorous people. The recommendations of the Committee on Food and Nutrition of the National Research Council, and the Council on Foods and Nutrition of the American Medical Association, in the interest of public health, demand the widespread use of enriched flour and enriched bread.

From Louisiana, J. H. Musser, M.D., Professor of Medicine, Tulane University of Louisiana, and Physician, Charity Hospital, New Orleans, writes that:

It has been shown that a very considerable portion of the peoples of the United States are eating an inadequate diet, a diet which lacks the vitamins and minerals necessary to good health and physical efficiency. One of the important reasons why the people in the lower economic group and many in the higher income brackets do not receive a sufficient amount of these elements is because ordinary white bread supplies so much of their dietary needs. If the flour is enriched by the addition of vitamins and minerals the cost is insignificant and the consumer supplements distinctly his ordinary foods with these invaluable and necessary substances added by the milling and baking industries. If all flour were enriched (or supplemented) by millers and bakers throughout the country, it would significantly improve the health and well-being of the people of the nation.

Arthur L. Bloomfield, M.D., Professor of Medicine, Stanford University School of Medicine, San Francisco, believes that:

The enrichment of white flour and bread with certain vitamins and minerals is one of the most important steps that can be taken to safeguard the health of the nation. It is now well known that many people are constantly on the verge of vitamin B_1 deficiency and that lack of vitamin B_1 is likely to occur in all but the most generous and varied diets. It is to be hoped that the baking and milling industries will make this essential contribution to safeguarding the health of the American people by following the recommendations of the Committee on Food and Nutrition in regard to enrichment of bread and flour.

James E. Paullin, M.D., Professor of Clinical Medicine, Emory University, Atlanta, Georgia, says:

From observation and experience, it is my firm conviction that the Committee on Food and Nutrition of the National Research Council has made a great contribution to one of the problems of securing an adequate diet for the American people, in persuading manufacturers to furnish vitamin-enriched flour for human consumption. Since bread is the most general single article of food used by all of the people, it stands to reason that the "new bread" will be most helpful in correcting certain types of deficiency disease. We should be grateful to the milling and baking industries for helping in this work.

George F. Dick, M.D., Professor of Medicine, The University of Chicago, writes:

I am in full accord with the recommendation of the Committee on Food and Nutrition of the National Research Council that millers and bakers throughout the United States produce without delay enriched flour and bread.

The President of The American Medical Association, Frank H. Lahey, M.D., Surgeon-in-Chief, New England Deaconess and Baptist Hospitals, and Director, Lahey Clinic, Boston, comments thus:

Under the direction of the Committee on Food and Nutrition of the National Research Council, the usual white flour, which practically everyone uses, has been enriched so that there is scientifically restored to it important factors lost in the milling processes. There has never been a time when we all need to maintain our health at a higher level than now. May I, therefore, lend my name in support of

the universal use of enriched flour and enriched white bread. Their use almost approaches a patriotic duty in these times.

In conclusion we have the opinion of W. H. Sebrell, M.D., Director of Division of Chemotherapy, U. S. Public Health Service, and Assistant Director, Division of Nutrition, Office of Defense Health and Welfare Services, Office of Emergency Management, who writes as follows:

Progressive and patriotic bakers and millers are making available a new white bread and white flour enriched with vitamins and minerals in accordance with the recommendations of the Committee on Food and Nutrition of the National Research Council. This program has the active support of the federal government. According to many physicians this is of the greatest importance to the public health. For the first time it is possible for the American public to obtain white bread and white flour containing significant quantities of the important vitamins and minerals natural to whole wheat. Everyone in this country should demand enriched white bread and white flour in preference to the unenriched products. This is one of the simplest and least expensive ways of making an important improvement in the nutritive quality of the family food supply.

The Vitamin Content of Hospital Diets

Most of our hospital diets have been carefully planned to supply adequate amounts of calories as derived from proper proportions of protein, fat, and carbohydrate as well as sufficient quantities of the essential minerals. In view of the fact, however, that during recent years, research in nutrition has made available figures for the vitamin content of the more commonly ingested foods, it seemed desirable to survey the vitamin content of some of the routine diets supplied to patients in a general hospital.

Six total diets for the day, as served in the University of Pennsylvania Hospital, were selected, three being so-called "house" diets, two regarded as routine for peptic ulcer (milk and cream; bland), and one as ordered for a diabetic subject. The "house" diets were those offered to a patient in each of three separate medical wards on three different days and each included, in addition to the three regular meals of the day, three "interval" feedings consisting either of fruit juices or chocolate milk. Each portion of food was weighed and its protein, fat, carbohydrate, calorie, thiamin, riboflavin, and vitamins A and C content calculated. The basic figures for the estimations were obtained from standard reference tables (Chatfield and Adams; Cowgill; McLester). The values for the daily allowances of the various vitamins as depicted in the table are those which have recently been adopted by the Committee on Food and Nutrition, National Research Council. It must be pointed out, however, that the values for the vitamin content of foods are approximate and do not take into account variations as influenced by cooking and preservation procedures.

Each of the six diets was found to fulfill the recommended daily allowance of vitamin A on the basis of sex and degree of activity. None, however, satisfied the thiamin requirement as stated by the National Research Council. The riboflavin content of the milk-and-cream peptic ulcer and the three "house" diets was adequate but that of the soft peptic ulcer and the diabetic diet was not. Two or the "house" diets and the diabetic diet contained adequate amounts of vitamin C; however, one of the "house" and both peptic ulcer diets were rather low in this dietary constituent.—*Thomas E. Machella, M.D., The Weekly Roster and Medical Digest (official bulletin of the Medical Society of Philadelphia), 37: 603, 1942.*

Better Nutrition and the Food For Freedom Program

T. SWANN HARDING[1]

ON DECEMBER 26, 1940, the Secretary of Agriculture issued a statement which appeared to be the precursor of the Food For Freedom Program launched by the Department of Agriculture ten months later. At the time hogs had been selling at very low prices and it looked as if the spring pig crop would be about 14 per cent smaller than that of the previous year. In his statement the Secretary called attention to the fact that the National Defense Program would result in rapidly increasing consumer demand. More people would have jobs; others would be earning more than they had previously. As an anti-inflationary measure it would be wise to have something useful for them to buy, and what more beneficial than more food in a country in which millions had been ill-fed? The statement was heeded. Pig production rose instead of going down and we turned the year witn prospects of more pork and lard as a result.

But just about this time it became apparent to people in the United States that Britain would have to have more than mere tools if she were to win the war. She had to have food. Indeed civilian animal-protein consumption in Britain had dropped 27 per cent below a pre-war level equal to our own. To conserve shipping space Britain urgently asked us for increased supplies of such concentrated foods as pork, lard, dried eggs, dried milk, evaporated milk, cheese, and some chicken meat.

Nazi Germany had overrun western Europe, thus depriving Britain of her nearby sources of dairy and poultry products, Denmark and the Low Countries. The British normally produced only 37 per cent of their own food and two-thirds of their imports had been from the Low Countries, while the remainder now faced a long, hazardous journey through submarine-infested waters.

Britain's call was heeded. On January 6, 1941, President Roosevelt outlined his lease-lend plan to Congress. His ideas were later embodied in the Lease-Lend Act which became law March 11, 1941. Under this law funds were made available for the purchase of American food by the Surplus Marketing Administration and its delivery to port for shipment to Britain. Of the one and a half billion dollars earmarked for this purpcse over half a billion was spent in 1941, and British civilian animal-protein consumption crawled up to within 5 or 6 per cent of pre-war levels by the end of 1941.

Fortunately the ever-normal granary had established huge reserves of feed grains which American farmers could readily turn into increased milk and egg production as well as pork and lard. The purchasing mechanism used to buy food for lease-lend shipment was the same as that which had been used in the past as a surplus-disposal device for obtaining food supplies to use in Red Cross work, direct relief, and the school lunch program. The use of this purchasing mechanism was broadened not only as to quantity but also as to quality, and for the first time there was a shift in emphasis which made adequate diets for all the primary interest of the Surplus Marketing Administration.

On May 5, 1941, as a result of a letter addressed by the President to the Secretary of Agriculture, an Office of Agricultural Defense Relations was set up within the Department of Agriculture. The administrative personnel of this office was announced July 10 and its function was essentially to act as a liaison between the Department and the War and Navy Departments and the emergency agencies.

Through the spring of 1941 it rapidly became evident that agriculture would play an increasingly important part in the nation's defense program. On July 5, 1941, U. S. Department of Agriculture defense boards were established in each state and each county to effect local coordination of all departmental defense activities, and to aid farmers and the Department in carrying out the farm defense program. On each board was a representative from each department agency having a field service.

Throughout the summer of 1941 complete surveys

[1] For 13 years Mr. Harding has been Editor of Scientific Publications for the U. S. Department of Agriculture. Recently he was made Senior Information Specialist detailed to the Food For Freedom information program.

of the farm plant were made as a background for steps greatly to increase farm production. On September 8, 1941, the Food For Freedom Program was announced along with the original agricultural production goals for 1942. For the first time in our history as a nation, farm production was being considered in terms of the basic, scientific, nutritional needs of our people. The production goals established were set up in view of these needs and of Britain's requirements.

For some years our average fluid milk production had been about 106 billion pounds. The year 1940 was a record year for agricultural production, one result of which was a yield of 111 billion pounds of milk. Another mark, 116½ billion pounds, was set in 1941. The goal for 1942 is 125 billion pounds, of which Britain is to get the equivalent of 5 billion, while the remaining 3½ billion pounds above the 1941 level will serve to enrich our own diet. That is progress, though not a great deal when you consider that nutrition experts claim that in the United States we should consume 140 billion pounds of milk annually in various forms. Nevertheless this program will gradually build up production to the point where sufficient food for an adequate diet will be available to all our own people after the war.

The British had additional need of certain fruits and vegetables. To carry out the program no increase in land cultivated seemed required beyond the usual 25 to 27½ million acres ordinarily devoted to export crops. Nor would it be necessary to neglect soil and water conservation or to plow up ground that had better remain under grass or in pasture.

On October 23, 1941, a nation-wide program for the prompt repair and reconditioning of all farm machinery was inaugurated. A farm scrap collection followed on October 29.

By the middle of November 1941, food was being shipped to Britain at a rate of a quarter million tons monthly. Then it began to look as if certain other nations would soon require food from the United States—Russia, China, and the Netherlands Indies. Next came the attack on Pearl Harbor on December 7, and everything changed overnight. Within a week our defense program had become a war program, and our regular sources of jute, certain fats and oils, and much sugar had been cut off. A re-survey of the 1942 farm-production goals announced in September became inevitable. This re-survey was duly made and the results reported January 16, 1942. On January 7 state and county defense boards had become war boards.

It is true our wheat supply still seemed ample for two years, and we had the largest supplies of corn and barley that we had had for twenty years. Egg production was at record level. We had fruits and vegetables in seeming abundance, though many of them, of course, were to be canned. However, it became more and more impossible to foretell the demands that would be made upon the American farm and food industries both by our allies and our own military expeditionary forces, while food buying would naturally step up under pressure of the industrial war program.

On December 13, 1941, the Department of Agriculture was fundamentally reorganized to speed our war effort. Many agencies were consolidated and the whole administrative organization was streamlined to facilitate quick action as needed.

On December 19, 1941, the Department of Agriculture took steps to allay fears about canned vegetables. Tomatoes, peas, corn and snap beans alone represent four-fifths of the vegetables canned. The British needed 4 million cases each of tomatoes and peas. Consequently a plan was announced to provide for our own and British needs through which the Department obligated itself to buy, and fixed the prices it would pay for all quantities of 1942 canned peas offered through October 31, 1942, and all quantities of 1942 canned tomatoes through December 31, 1942. Canners who wished to sell to the Department had to be certified by their state war (formerly defense) boards as having paid specified reasonable prices to growers which exceeded by definite amounts 1940 prices paid in the same localities for canning vegetables. The tin was allocated to cover these products even though its use will be prohibited for many nonperishable and other food products where it is not absolutely needed. In a broad way the 1942 goal is for a pack 45 per cent above the 1935–39 annual average. Most of the increase is in peas and tomatoes. The objective is to use canning plants to full capacity.

On December 19–20 the National Garden Conference was held in Washington under the auspices of the Secretary of Agriculture and the Administrator of the Federal Security Agency. A goal of 1,300,000 farm vegetable gardens had been set up. More school and community gardens were encouraged where soil is favorable, supervision expert, and no wastage of seed, fertilizer, insecticides, and other valuable materials likely to occur. Persons in towns or cities are advised not to attempt gardening unless they have previously had gardens. No all-out, back-garden campaign is intended, however, and no parks, playgrounds, grass plots, or ornamental gardens should be sacrificed.

In a broad way it is hoped that the garden program will serve to enrich the American diet and improve the health of Americans. Emphasis is placed upon the growing of vegetables which can be eaten where and when produced. This will save transportation, processing, preserving, and packaging costs. It will protect the food stamp and school lunch programs and tend to relieve temporary scarcity of certain protective foods in some localities.

January 1942 finds the Department of Agriculture

in a less complacent, less self-righteous mood. It had seemed through most of 1941 that the American farmer could rise to the occasion and surely produce all the food and fiber our own people and the people of our allies might require. But as conditions became more complex this did not appear too easy or even so certain. The farm is highly mechanized and when the farmer wants equipment and material he dives into the same priority pool that serves industry and the military establishments.

Add to material scarcities the shortage of farm labor and the further fact that we cannot now possibly estimate the requirements of the United Nations a year ahead, and the problem becomes really complex. The nations allied with us have pooled their resources and we have thrown what we have into that pool. As the bridge of ships grows, the food will flow from the United States at an ever-increasing pace.

The main emphasis now is upon additional production of fats, oils and sugar. The production of peanuts for oil if possible will be increased 155 per cent above 1941 levels, and soy beans for oil, 54 per cent. Price support will be used to stimulate production of all three crops while loans will be made available on flaxseed as well. There will be no limitations on planting or acreage restrictions on sugar cane or sugar beets.

The milk goal remains the same; the egg goal has been raised 200,000,000 dozen, but even that will give Americans but 25 dozen eggs per capita instead of the 30 dozen nutritionists say they should have. We are to slaughter 10 million more hogs than ever before and produce more lard per hog. Corn quotas in the commercial area have been increased 10 per cent. While we have plenty of short-staple cotton, a million acres more of cotton will be planted and premiums paid on staples one and one-eighth inch or more.

Wheat, as a whole, will be curtailed to 88 per cent of 1941 production and large quantities will be sold as feed in order to clear storage space for the new crop and to expand feed supplies in some areas. Dried bean production is to go up 13 and dried field peas 73 per cent above 1941 production levels. We shall have 18 million cases more of canned fruit and vegetables than in 1941 and, it is expected, 100,000 tons more of dried fruit than in 1941.

It is estimated that we shall produce 10 per cent more potatoes than in 1941, 10 per cent more turkeys, 10 per cent more commercial truck vegetables, 6 per cent more barley, and that we shall slaughter 8 per cent more cattle and calves and 1 per cent more sheep and lambs. Market garden vegetables are expected to remain about the same.

As a whole, farm production in 1941, an all-time high, was only 13 per cent above average annual production in the period 1935–39. Expected production in 1942 is 19 per cent above that level or 25 per cent above the 1935–39 level, if wheat, production of which is to be curtailed, and cotton and tobacco are omitted from consideration.

Our present task is to provide sufficient food for our own people and for our allies. Our first task after the war will be to feed the hungry elsewhere in the world as our partial contribution toward making the better world of tomorrow.

The Nutrition Society

The people of Britain have not allowed the war to prevent progress in many directions. Of this the latest example is the foundation of the Nutrition Society. Before the war the need for such a society was often discussed by workers on nutritional research, and a year ago informal meetings of about twenty representatives of the principal laboratories began. A provisional committee consisting of representatives of hospital schools, schools of agriculture and nutrition research laboratories, with Sir John Orr, F.R.S., as chairman, has been formed. About two hundred and thirty scientists who have been working on nutrition have been invited to become original members. Of these about fifty are medical men and women. During the war the society will hold meetings at various research institutes. The first meeting has been held at Cambridge and was opened by an introductory address by Sir Gowland Hopkins, F.R.S. Louis Harris, A. M. Sinclair, John Yudkin and G. W. Robertson discussed "Assessment of the Level of Nutrition in Man"; B. S. Platt, R. H. Dobbs and W. C. W. Nixon, "Clinical Signs of Dietary Deficiency"; C. K. Crowther, H. H. Green and John Hammond, F.R.S., vice chairman of the society, "Nutrition of Farm Animals." An open discussion followed. The new society performs the valuable service of bringing into touch with one another workers in various fields. It has been difficult for the clinician to keep up with the advances of the biochemist or the agriculturist planning production to make full use of the knowledge of the dietitian for the community's needs. Here is the remedy.—*Foreign News, J.A.M.A., 117: 2184, 1941.*

Air Raid Precautions in Residence Halls

ELIZABETH C. GIBBS[1]

WITH the thought that our experience may be suggestive to others who are responsible for organizing a residence hall, club, or other institution for the safety of its residents in case of an air raid alarm or blackout, we present here the organization and procedures which we have worked out for Whittier Hall, a residence hall accommodating 400 graduate women students of Teachers College, Columbia University. On the back of each resident's room door the following instructions have been posted:

INSTRUCTIONS FOR RESIDENTS OF WHITTIER HALL

(*To be posted on back of door*)

1. An organization for protection of all residents in case of air raid alarm has been completed and is now in operation. Chance of injury to any resident has been reduced to a minimum if each resident will follow instructions listed below and orders from building control directors and their aides. Therefore, there is no basis for fear or excitement in case of any eventuality.
2. *Instructions:*
   (a) In case of alert signal by fire siren or University horn each resident should: close the window and transom; pull down the shade; put on a coat and low-heeled shoes; take a pillow and blanket (your knitting if you choose); turn out all lights; lock the door; go into the corridor and sit down; and stay away from windows.
   (b) Residents on the 8th floor will *walk* down the nearest stairs to the 6th floor and will sit down in the corridor outside the rooms corresponding to their own.
   (c) Residents on the 7th floor will go to the 5th floor.
   (d) Residents on the 2nd floor will go to the 4th floor.
   (e) Residents who are in the Students' Kitchen on the 10th floor will: turn off all gas; turn out all lights; walk down to their designated floors.
   (f) Evacuate the 2nd, 7th, 8th, 9th, and 10th floors, the main floor and basement.
3. Telephone service will be reserved for official calls only.
4. Elevator service will be suspended.
5. When "All Clear" is sounded residents should walk back to their rooms.
6. The Student Aide on your floor is————————room——.

After a trial drill it was found that some of the shelter areas were so overcrowded that in some cases these general instructions had to be changed to very specific instructions such as: "Room 203. Go to 4th floor. Sit in main corridor—back to west wall—facing north elevator." Such adjustments would not be necessary if corridors were uniformly wide.

GENERAL INSTRUCTIONS

Should residents line up against one wall? It was suggested after our first drill that residents should line up against one wall—all facing the same way—in order to leave a passage along the opposite wall for House Officers, Student Aides, and Nurses who now have to clamber over legs and feet extending from both directions into the center of the corridor. To date, we have not made this change believing, in the interests of maintaining morale, that it is better for the students to sit facing one another so that they can converse easily and naturally than to have them regimented in one line staring at blank walls.

Smoking? Some residents have asked if they could smoke during an air raid alarm. While we recognize that smoking might be very helpful in reducing tension for those who like to smoke and that probably it would be quite harmless, we fear that ventilation in the crowded corridors will be none too good at best and that smoke would become irritating to smokers and non-smokers alike. Since any air raid alarm we may have is not likely to be of long duration, we think it fair to ask that residents refrain from smoking in the interests of comfort for all.

Windows Closed? We are generally instructed that in the event of an air raid alarm at least one window in each room should be left partially open so as to reduce the pressure on the glass-and lessen the danger from shattering glass if a bomb should explode nearby.

Contrary to these instructions we are asking our residents to close their windows because: (1) since the rooms are empty, no one will be hurt by shattered glass; (2) if windows are closed, shades and curtains will not flap outside and the blackout will be more complete; and (3) corridors where residents are sitting will not be chilled by cold air seeping through around doors and transoms.

[1] Mrs. Gibbs is Manager of Residence Halls, Teachers College, Columbia University.

INSTRUCTIONS FOR MAIDS

Maids. For our dormitory maids who are in the building only during daylight hours we have prepared these special instructions:

In case of an air raid alarm during your working hours, please observe the following precautions:

1. Be calm and quiet.
2. Remove truck, vacuum cleaner, and other tools from the corridor. Be sure corridors are entirely free.
3. If you are scrubbing, be sure you do not leave water or soap on the floor or stairs.
4. If you are working in a student's room, close the window, turn out the lights, and lock the door.
5. If you are on the 4th, 5th, or 6th floor—sit down in the corridor by the linen room door.
6. If you are working on other floors, *walk* down or up the stairs to the 4th, 5th, or 6th floor and sit down in the corridor by the linen room door.
7. If you are working in the laundry, turn off all gas and electricity, close the windows, close the door (do not lock it). Walk to the 6th floor corridor and sit down.
8. Do not try to use the telephone.
9. When the "All Clear" is sounded, go quietly back to your work.

INSTRUCTIONS FOR STUDENT AIDES, WHITTIER HALL

On each resident floor four Student Aides have been appointed—each responsible for about fifteen residents on her corridor. Their instructions as follows are self-explanatory:

1. Always have the following available for use in case of an air raid alarm:
   Whistle, low-heeled shoes, coat, flash-light, list of students on your corridor for whom you are responsible (keep this up to date by checking frequently with the post office for changes and additions), and pad and pencil.
2. When you hear an alarm—blow your whistle to arouse students on your corridor.
3. Put on shoes and coat. Take flash-light, list, pad and pencil.
4. Close your own window and transom. Take your pillow and blanket. Close and lock your door.
5. *Take your time. Be calm.*
6. *If you are on an "evacuated" floor:* Close windows and turn out lights in parlors and lavatories. Make note of names and room numbers of transients from cards on their doors. Go to your designated floor and deposit your pillow and blanket in its proper location.
   If you are on an "occupied" floor: Deposit your pillow and blanket in its proper location. Close windows in parlors and lavatories. Fill bathtubs with water. See that blankets have been hung over windows in parlors and corridors.
7. Take roll of residents in your corridor.
8. Check with post office to see if absentees have checked out and that all transients are accounted for. (Student Aides will walk down to the post office but elevator will be available to take them back up to their floors—except in case of an actual raid.)
9. Report to the Key Director (Mrs. Gibbs) for further instructions.
10. Unless otherwise directed, go back to your floor. Report to the Key Director or other House Officer any matters that need attention. Help in whatever way you can to keep up morale of your group. Be ready to help out in emergency.
11. When "All Clear" signal is sounded, advise students to return to their rooms.
12. In case it is necessary to evacuate any section of the building: Wait for orders from one of the House Officers. Remain calm. See that students walk in orderly fashion down the nearest stairs (not the fire escapes) to the main floor where they will be given further instructions.
13. Appoint someone on your corridor to act as your substitute in case you are out of the building. Give name to Key Director.
14. Report to the Key Director at any time any criticism you may hear concerning these procedures or any suggestions for improvement.

A number of other Student Aides have been given special assignments such as covering corridor windows with blankets; checking "evacuated" floors; and helping in the main office. These Student Aides have met with the House Officers and helped formulate our organization and procedures. They have met with their own small groups to explain these procedures and note criticisms and suggestions. Many of the aides are taking first-aid courses and it is our plan to give them special instruction in the operation of fire extinguishers, the stirrup pump, and other emergency equipment.

It is a disputed question whether to fill bathtubs with water. In view of the shortage of New York's water supply we have instructed our Student Aides to omit this part of their procedure for the present.

GENERAL ORGANIZATION

The *Key Director* is responsible for the whole organization. She will be stationed at the main office during an air raid alarm and see that all stations are covered and all emergencies cared for. She will keep in contact with University and City authorities.

The *Social Director* and her Student Aides will cover the "occupied" floors; see that all room lights are out, doors and transoms closed, that residents are in their proper places. She will keep up morale, keep in touch with Nurses, and be ready for any emergency.

The *House Manager* and her Student Aides will check the "evacuated" floors; go into every room to be sure that it is vacated; check on lights, windows, doors and transoms; and watch low roofs for fires.

The *Building Superintendent* will remain in the basement on call to handle emergencies in connection with the physical equipment of the building—heat, light, water, gas and power. He and his employees are responsible for pulling elevator switches, locking all doors, closing windows and turning out lights on the main and basement floors.

Since only one man is on duty in the building at night, men of the faculty families who occupy one wing of the building have been called upon to assume responsibility for policing, fire-fighting, and roof watching. All of these men are being instructed as to the peculiar characteristics of demolition and

incendiary bombs, the best methods of fighting fires, the location of emergency equipment and how to use it, the physical characteristics of the building, and first aid.

Nurses and First Aid. Our two Resident Nurses, equipped with first-aid kits, will cover the three "occupied" floors and will keep in close touch with the Social Director and the Student Aides.

In addition, the University has assigned other Nurses (students living in Whittier Hall) who will be on duty during an air raid alarm. One large room, centrally located and adjacent to one of the lavatories, has been set up as the first-aid room where emergency supplies and equipment are readily available.

Student Aides—Main Floor. Two Student Aides are assigned to cover the front entrance in order to admit residents and others seeking shelter during an alarm.

Two Student Aides are assigned to the air raid shelters on the main floor where guests and others seeking shelter in the building will be assigned.

Two Student Aides are assigned to the main office to answer the telephone, to listen to the radio for official bulletins, to give out keys, to make out lists of transients, etc.

One Student Aide has learned to operate the elevator; another is to act as messenger.

Substitutes. Since it is expected that officers and students will continue to live normal, active lives, it is conceivable that an air raid alarm may come at a time when not all of those assigned to special duties will be in the residence hall. Each House Officer and Student Aide, therefore, has appointed a substitute to act for her in such an emergency. A complete list of the air raid personnel, an outline of their duties, and the names of their substitutes is posted on the bulletin board and is in the hands of each House Officer.

ALARM

In many communities the alarm will not be a problem since there is an adequate fire siren available. In New York City we do not have a single siren system powerful enough to arouse the whole city so temporary methods have to be adopted. Through a carefully worked out system all Key Directors are to be advised by telephone of an air raid alarm; but each Key Director has to plan, within the limits of his own facilities, to spread the alarm in his building. If you have a fire alarm system—that's fine. If you don't, you have to develop cruder methods as we have in Whittier Hall.

The Key Director, the Social Director, the House Manager, and the Superintendent will be notified by telephone from the college switchboard. Each of these officers will spread the alarm on two floors, using a police whistle; the Student Aides will pick up the signal and arouse the residents on their corridors.

BLACKOUT PRECAUTIONS

Windows at the end of some of our corridors presented a problem. We did not want to black them out permanently, darkening our corridors, and presenting a constant and gloomy reminder of impending doom. So we settled it this way for the present at least. We covered the upper sash under the window shade and the curtain with plywood. For the lower sash we made a blackout curtain from an old, dark-grey blanket; hooks were put on the window-frame and loops on the blanket; the blanket was folded neatly and stored in a niche close by; and the student in the adjoining room was assigned the task of putting up this curtain in the event of an air raid alarm. Since a blanket would not provide sufficient protection against shattering glass, residents are instructed to sit well away from these windows.

Since toilet rooms must be available for use during an alarm, we have had to concede a point here and permit these windows to be covered with blackout paint.

Windows can be blacked-out in ways that are not objectionable. Managers who are alert to their responsibility for keeping up morale as well as for protecting the lives of their residents will want to familiarize themselves with such methods. A department store here in New York has achieved some striking effects with mirrors and aluminum paint. Your present draperies can be lined with black sateen; but they must be large enough to cover the windows completely, frame and all; and they should be taut so as to provide reasonable protection from broken glass. Your carpenter can make a good-looking panel of plywood which will cover your whole window. A sliding section can be constructed in the panel which will admit fresh air and sunshine during "raidless" hours. Windows painted (outside) first with a coat of white paint and then with a coat of black paint will be opaque but not so depressing. Watch your newspapers for other suggestions.

As residence managers we must organize for an emergency. We hope and pray that such an emergency will never arise.

Editorial

THE DETROIT MEETING

Under the direction of Mable MacLachlan, program chairman, and Mary M. Harrington, convention chairman, plans are well under way for the Twenty-Fifth Annual Meeting of the American Dietetic Association at the Hotel Statler, Detroit, October 19–22. The program will be based on the needs of our country at the present time. Problems pertaining to labor situations, substitutes for equipment, food and equipment rationing, food economics, community education and public health nutrition will be stressed. Among the speakers of note who have accepted invitations to address the Association are Drs. Louis H. Newburgh, Howard B. Lewis, and Arthur Smith.

Dr. Newburgh, professor of clinical investigation, Department of Internal Medicine, University of Michigan, who will speak at the opening meeting, is an authority on dietetics and nutrition as they relate to clinical medicine. He has been assistant editor of the *Journal of Clinical Investigation* and *Journal of Nutrition*, is now a member of the National Research Council and was chairman of a section of the National Nutrition Conference for Defense. He is the author of several books and papers concerned with his special professional interests. It will be especially gratifying to members of the American Dietetic Association to have Dr. Newburgh as speaker at the opening session, for throughout his medical career he has worked with and encouraged dietitians and has been responsible in a large measure for the position dietitians have attained as co-workers of the physician in that increasingly promising field of medical therapy—dietetics.

Dr. Lewis, who is professor of biological chemistry, University of Michigan, is a graduate of Yale University where he studied under Lafayette Mendel. He is past president of the Society of Biological Chemists and a member of the National Research Council. Dr. Smith, professor of physiological chemistry, Wayne University, Detroit, is also a graduate of Yale University and a former student of Professor Mendel.

Further details concerning the speakers and the program will appear in subsequent issues of this JOURNAL.

Information in regard to hotel and railroad rates appears under the news section of this issue.

NUTRITION EDUCATION VIA PRESS AND RADIO[1]

A word of caution seems in order if we are to avoid any lessening in the enthusiasm for the National Nutrition Program. Those who teach the public should not fail to bolster their teachings with substantial and down-to-earth facts. We note that articles on nutrition have reached even the pulp magazines, and this is a good thing if the tenor of such teachings does not lead the public to expect miracles. According to Dr. Elvehjem, those of us in nutrition work must emphasize, among other facts, that new improvement in health through nutrition can be a slow process. "In some cases an improved diet will show immediate improvement in the health and activity of an individual, but in other cases it may take years and perhaps even a new generation to see the complete results." Meanwhile all possible means of reaching the public must be sought in carrying out the tremendous program ahead of us.

One important medium through which we can educate the public in nutritional facts is the daily or weekly newspaper. Unless a writer has a column in which he can routinely refer to nutrition items of interest, such items must appear in the form of news stories. To those who have had the benefit of a course in journalism, the principles of a good news story are well known. These principles must be applied if the story is to get by the editor's desk and not be shelved for rewriting, or discarded because it smacks of publicity for the author, or is too dull to be of any interest or news value. The "lead," or first paragraph, should answer all of these questions: *What* was or will be done? *Who* did it? *When?*

[1] Based on addresses by Dr. C. A. Elvehjem, Department of Biochemistry; Mr. Bryant Kearl, Department of Agricultural Journalism; and Mrs. Aline W. Hazard, Director of Home Makers' Hour, Stations WHA and WLBL, during the Nutrition for Defense Refresher Course, University of Wisconsin, February 6–7, 1942.

Where? How did it happen? and *Why* is it important? After the lead has been written and checked with these questions in mind, then proceed to the rest of the story which should also follow a definite pattern: *i.e.* most important statements first, followed by others in descending importance. This is recognized newspaper practice, so that even though the reader stops half-way through he will have absorbed most of the writer's message; further, cutting necessitated during makeup may take away the last paragraph or two. As for the ending, the best way to conclude is just to stop—especially since the summary appears in the first paragraph. All stories should be neatly typed, double-spaced, and all facts checked and re-checked to ensure perfect accuracy.

"Scientific writing requires precision, but usually precision can be achieved without the use of long words, sentences and paragraphs," states Mr. Bryant Kearl. "Even a word as common to dietitians as 'protein' can confuse the average reader unless explained." Stories should be submitted while they are still news and in time to meet the deadline of the edition for which the article is intended. A news story should not include the writer's comments. The writer's "name should be mentioned, for this places the stamp of authority on the article, but editors are suspicious and resentful of people who put themselves ahead of their work. Publicity for the field of nutrition is important, but publicity for the individual is far less consequential." To do her job of educating people to make better use of the knowledge of foods, the nutritionist must observe the press agent's rule and give the editor what he wants and, what is more, she must compete with professional press agents in the struggle for newspaper space. If the writer will take the time and has the patience to apply her nutrition story to local problems, she will be rewarded by seeing her story in print, for it will fit into the definition of news. "For instance, in a farming community she can write stories emphasizing the farm products in the diet, particularly farm products that are of local importance." Announcements of radio talks, meetings or food demonstrations, incidentally, have news value and will assure an audience if printed in the paper in advance.

Radio can be a powerful force in teaching nutrition, but it demands facts, clever presentation, and a coordinated plan of procedure if tangible results are to be accomplished.

Series of nutrition broadcasts coordinating the work done in classrooms and with homemaking and demonstration work, planned months or a year in advance, are proving highly successful in Wisconsin, according to Mrs. Aline W. Hazard. Broadcasts from the site of a demonstration, from a nutrition classroom or a garden, although more expensive, were found to be especially impressive as they seemed spontaneous and real. Sound effects, too, such as the whir of an egg beater, can make such broadcasts more natural.

After a program has been planned and is ready to go on the air, Mrs. Hazard suggests that the nutritionist in charge enlist the aid of friends, a "nothing-but-the-truth" group, to evaluate her radio work. The truth may hurt—but it also helps.

TRAINING IN GOOD FOOD HABITS[1]

"Perhaps the most effective way to solve the nutrition problem is to build good food habits *early* in the life of the individual," according to Dr. Margaret H. Irwin. "Adults show a certain apathy and resistance but children are malleable. Mothers are more susceptible to the intrusion of knowledge about nutrition and more determined to apply it when they have young children to feed than at any other time in their lives. Perhaps by hitting here and hitting hard we can accomplish something of permanent value in building the health of the nation. If youngsters can be brought up eating what they should, they will, when the time comes for them to make their own choice, choose wisely."

The problem of feeding preschool age children resolves itself into two phases: what to feed the child and how to feed him. The Committee on Food and Nutrition of the National Research Council has set up needs for optimal nutrition for the preschool child. Of course no two children have exactly the same food needs but a diet based on these standards does give us something to aim at. Rules which will ensure that the child eats this diet are not so easy to establish.

Dr. Irwin states that "At two years of age the child should be allowed to grow up in his food habits. He has a goodly number of teeth and should be permitted to use them. His food can be chopped rather than puréed. He may be brought to the family table and may eat the family meals, provided the members of the family are willing to re-educate themselves to enjoy simple dishes, less rich and less highly seasoned. This doesn't hurt the family and the mother's duties in preparing food are lessened—permitting her more time for companionship with the family."

Many children in this modern day and age are "eating problems." "Very slow eating, dawdling, chewing endlessly and not swallowing, leaving the table to go to the toilet, playing with their food, and silly behavior at the table are ways in which children manage to use the eating situation as a means of gaining attention or exasperating their parents. We

[1] Based on addresses by Dr. Margaret H. Irwin, Department of Home Economics, and Florence Beatty, President, Wisconsin Home Economics Association, and Supervisor of Home Economics, Milwaukee Public Schools, at the Nutrition for Defense Refresher Course, University of Wisconsin, February 6–7, 1942.

parents spend the first seven years trying to get our children to speed up their eating and we are so highly successful that we usually have to spend the next seven years trying to get them to slow down."

There are a few simple rules which may help: Meals should be regular. The appearance, odor, taste, and texture of food make a strong appeal to the child. "Servings should be small with a chance at seconds"—a plate loaded with adult-sized servings is discouraging to a child. A child's food should be served in such a way as to be easy for him to handle. "For instance, a lettuce leaf that can be picked up is readily accepted by the child whereas shredded lettuce is almost impossible for him to manage. Soups are better served in cups with two handles than the usual soup bowl and spoon. Toasted bread cubes are better to serve with soup than a crumbly sandwich. Stuffed potatoes should be cut crosswise so that they can be grasped with one hand and dug out with a spoon in the other."

Children often refuse a new food. Their interest in it can be awakened by telling them something about it and they can usually be induced to take one or two bites. If this procedure is casually repeated they soon learn to like it. Also, children can often be encouraged to eat a certain food by telling them the reason why they need it. Discussion of food likes and dislikes should be strictly avoided by adults in the presence of children, and the generally accepted rule of a clean dinner plate before dessert should be strictly enforced.

On the subject of eating between meals, Dr. Irwin observes that a small child whose stomach can't hold very much at a time may do better when fed smaller quantities oftener than three times a day. She also stresses the fact that an excitable child often benefits from a rest period before meals. She concludes, "Common sense, patience and a sense of humor will go a long way toward helping a child make that difficult transition from natural infancy to civilized maturity."

When the child reaches school age, the public school teacher can play a large part in helping him and his parents to apply the rules of nutrition. The first duty of the teacher, according to Florence Beatty, is to become acquainted with the homes of the pupils. In small communities this may be accomplished by home visitations, but in large communities or where distances are great, carefully worded questionnaires for pupils and parents to fill out may be used. Records from welfare and social agencies, school records, and guidance reports are helpful, and often class discussions throw light on a child's background and the standards of his home. Once the basic needs of the group have been determined the next problem is presenting the material. In the Wisconsin schools home economics courses are offered from the 5th to the 12th grade and the methods of presentation must be adapted to the age group. Among the many procedures which have seemed to bear fruit in the Milwaukee public school program are the following:

For the younger children, use of scientific terms is limited, with the possible exception of the terms, vitamins and minerals, which are commonly used by press and radio. Such phrases as "Go Foods" and "Grow Foods" are suggested as helpful in clarifying some scientific truths. The children are permitted to help in the selection of vegetables at the curb market or grocery store and to decide how to prepare them, and finally to cook and serve them attractively, thus developing an interesting and instructive procedure. Older children are also allowed to help prepare and serve nursery school lunch and to take turns sitting with smaller children during meal time. Both age groups profit by the experience. Children are encouraged to bring recipes from home and to demonstrate their preparation. Other devices which have proved helpful include instruction in constructing simple posters on food subjects and in keeping personal score cards on eating habits. If a school can afford a supervisory home economics teacher who can work with any group in the grades where the use of food enters into a project, the results are generally more satisfactory.

For high school pupils, procedures used in the grades can be raised to their level of ability. In addition, the school cafeteria can be used as an educational medium with this group, through discussions in student council, talks in assembly, charts and posters, and student checking of trays for adequate lunches. More detailed food study may be undertaken with attention to the progress of the science of nutrition as brought out by press, periodicals, and radio. Again, scientific terminology may detract from the pupils' interest unless the school requires sciences as a prerequisite to the home economics course. Evaluations of radio programs, discussions of advertising methods, and exposure of food fads serve to increase interest in the facts of nutrition. Today the menus for the armed forces have great popular appeal, particularly for boys, and their basis on scientific knowledge is especially impressive. Menus using foreign dishes familiar to the pupils are also impressive and practical.

A final challenge, and one which may prove to be the most difficult for the teacher to meet, is the need of finding techniques to "educate father," for, as Miss Beatty astutely observes, "No one doubts that the cooking in the average American home is determined by the likes and dislikes of the man of the family. If he spurns vegetables and fruit, and considers milk an expensive drink, then the reform will not go far." To a certain extent one "may fool him into eating what he should, but it is better for him to understand his needs and have a desire to care

for them. A hopeful sign in some of our industrial centers is the fact that manufacturers and labor leaders are being included on nutrition committees, for we need to have everyone working to make our 'forty per cent malnourished' a thing of the past."

EXHIBITS AS INFORMATIONAL MEDIA[1]

"Do they attract attention? Do they sustain interest? Do they convey the message they are intended to convey?" These three questions were the basis of a study of a large number of displays in the Medicine and Public Health Building at the New York World's Fair during 1939, conducted jointly by the U. S. Public Health Service and the American Museum of Health. In addition to constructive ideas and directions for the best use of exhibit space for informational purposes, the study revealed several factors to be avoided in planning exhibits. Following observers around the exhibits at the Fair, timing and testing them, and studying the displays themselves were the methods used in reaching these conclusions.

In general, it was found that the public was vitally interested in the exhibits on health. Most of the displays were elaborate and costly. They offered an excellent opportunity for studying professionally designed and constructed exhibits. The fact that errors in planning, preparation, and arrangement of materials were evident in the displays well illustrates the need for continued evaluation of this educational medium.

The following list of proved shortcomings of displays included in the study might well serve as a warning of what *not* to do for anyone planning to construct educational exhibits:

Extensive Exhibits. The length of time spent at each exhibit was very short. The average for individual exhibits in the Hall of Medicine was a little over two and a half minutes and for those in the Hall of Man, approximately one and a half minutes. With such short exposure, nothing is gained by placing on display material that requires much time to examine and understand.

Technical Words. In general, the public does not understand technical terms; hence the legends should include only simple everyday words.

Inadequate Labeling. Though legends should be brief and simple, all material should nevertheless be labeled unless the reproduction is so good or the article portrayed so commonplace that there can be no question as to what is meant. A good way of checking one's own judgment is to try out an exhibit on a number of laymen who are representative of the population to whom the exhibit is to be shown.

[1] Based on an address by Mayhew Derryberry, Ph.D., Chief, Health Education Studies, U. S. Public Health Service, Bethesda, Maryland. Presented before the American Dietetic Association, St. Louis, October 22, 1941.

Complex Statistical Facts and Charts. The public is not interested in an exhibit containing a large number of complicated charts, nor is it possible to assimilate a mass of statistical data. Only simple statistical facts, if any, will be noted.

Unrelated Attention-Getting Devices. Objects used primarily to attract attention should not be so interesting that they divert the spectator's attention from the educational material in the exhibit.

Use of a Single (and Specific) Example to Illustrate a General Principle. The exhibit should not be limited to one example if it is intended to portray a general principle, else the specific example may be interpreted as the general principle.

All Possibilities of Misinterpretation. The method of display, its construction or placement among other exhibits, sometimes will cause misunderstandings. Again, the only safeguard against misinterpretation is to try out the exhibit, if possible, with groups representative of the people to whom it is to be shown.

Faulty Arrangement of Exhibit Materials. Everyone would agree that exhibits should be so arranged that spectators can easily see the material displayed. Yet it is not uncommon to find that, because of faulty arrangement or organization of the material, important panels and sections are completely or partially obscured.

THE COLLEGE TRAINING OF THE EXECUTIVE[1]

One of the major problems with which industry is vitally concerned is a shortage of capable executives. Employee training is being carried on to a degree hitherto undreamed of, but this training has dealt mainly with mechanical skills and has been of comparatively short duration. Where, then, are the executives coming from? Their decisions and actions will guide and control the employees now being hired and trained. This is not merely a temporary problem, for the need for soundly trained executives will be intensified in the years to come when we will have to make difficult adjustments required in a post-war period.

Industry, for a number of years, has been looking to the colleges and universities for its potential executives. But this program has not been entirely satisfactory for several reasons. Many college graduates entering industry do not advance as rapidly as they should. Because speed is the essence of executive training, it is important that

[1] *Editor's Note.*—The above is based on an address entitled "What Can Colleges Do to Assist Industry in Training Executives?" by A. R. Kelso, Assistant General Manager, United States Cartridge Company, before the Society for the Advancement of Management, December 4, 1941. While primarily concerned with the problems of industry, because of its application to the problems of the dietitian as an executive, the paper has been summarized for the readers of this JOURNAL.

young people on leaving college be thoroughly prepared to enter their chosen fields, thereby shortening the training period which will lead to executive responsibilities. In modern industry there is no place for the individualist. Effective coordination within any organization demands a high degree of cooperation from the individual, a willingness to submerge his individual interest, temporarily at least, in order to achieve the greater objective.

The college should prepare young people so that their apprenticeship training on the job can be most effective. The change-over from college life to a job is frequently difficult. The "co-op plan," in use in a very few colleges, makes this transition from theory to practice easier.

Colleges can best assist industry in training executives by using the scientific approach. First, they should find out what educational training is needed to produce executives. A survey of the successes and failures among college graduates of the past ten years might serve to determine why some succeed and others fail. Second, the college curricula should be analyzed in the light of these discoveries and corrective action taken where necessary. Third, an inventory of the college personnel, *i.e.* the teaching staff, should be taken to see whether it is adequate in numbers and experience.

A few of the comments heard concerning college graduates which give a clue as to what is expected of them are the following: Many college graduates do not know how to ask for a job either in person or by letter, or to organize and present their ideas on paper. Many a young executive trainee fails because he is not able to write a clear, concise report; many others because they cannot talk on their feet. Emergencies occur when one must think through a problem rapidly, organize an answer and state it clearly to a group of people. The junior executive needs training in handling people, but only the college graduate who has specialized in personnel and management seems to have any knowledge of the fundamentals of selecting, training and guiding people. Some of the starting salaries expected by college graduates without practical experience are amazing. They may have been trained in accounting, yet be utterly unaware of the relationship between costs and profits. Those who have worked their way through college progress more rapidly, since they have learned the value of the dollar and know salary and wage ranges. It is of prime importance to the college student that he select his vocation early and immediately begin to qualify for the job ahead, yet a considerable number leave college, seek a job more or less at random, and let nature take its course. Experience makes executives. Sometimes this comes with a single company, but more often a person with a goal and a plan realizes he must occasionally change his connection in order to accelerate progress toward the final objective.

A good substitute for practical training during the college years is the case method of instruction now used by a few institutions, but this is effective only if the case problems are based on actual experiences and are kept up to date. All textbooks, too, especially those dealing with personnel problems, should be kept strictly up to date. They should not only present well-established principles but should describe how these are put into practice.

Teaching methods, like mechanisms, should be examined at regular intervals to see if they need to be overhauled. Industry has adopted the conference method for training executives, and this technique could be used to a greater extent in colleges. The traditional lecture method should be re-examined in the light of the research mentioned above. In examining the college personnel, the size of classes should be considered to see whether they are too large to be handled effectively. Instructors should have more than a theoretical or textbook knowledge of what they are teaching. Professors and assistant professors should frequently return to active and practical sources of information to keep in touch with the changes that are taking place. Finally, those who teach the practical problems of management must have an up-to-date background of actual experience which alone can give them suitable case problems and an understanding of real conditions.

Current Comment

NUTRITION EDUCATION IN AN INDUSTRIAL COMMUNITY[1]

CARL A. GRAY

The achievements of the science of nutrition in recent years should mean as much in improving the health of the nation as the introduction of new alloys has meant to industry in improving the physical property of steel for particular applications. Without the introduction of these new alloys our present defense program would be seriously handicapped. But we also need healthy people to man our plants. Your contribution is to the men who machine this steel. The manufacturers will listen to you. Most manufacturers are directly concerned with the welfare of their employees. Moreover, they are being pressed to meet important delivery schedules for defense. Proper nutrition for workers means better workmanship, more alert workers, fewer

[1] Presented before the American Dietetic Association, St. Louis, October 23, 1941. Mr. Gray is President of the Grenby Manufacturing Co., Hartford, Conn., and originator of the Community Plan for Vocational Training.

accidents, greater efficiency and less man-hours lost by illness. Every hour counts today.

You should reach not only the large manufacturers, but also the small manufacturer who is of the greatest importance. The 10,000 or 100,000 people employed by large companies are but a small proportion of the total number of people who earn their living in small shops. The loss of a single man or an accumulated amount of down-time because of illness is a more serious blow to the small business than to the large corporation employing thousands where substitutions can more easily be made.

In the past, like true professional people, you have been working quietly, making discoveries and proving to yourselves over and over again the merits of your work, but neglecting to bring these discoveries to the attention of the public. With your program, which is an essential one, you can attract the busiest people. Make certain these people are the kind whose backing means something. Once you have that, you can coordinate all agencies in the community, public and private, in a single effort to improve nutrition. If surveys are needed and you have no staff, get an agency such as the State Employment Service to help you.

Many old establishments are coming to life, and are rehabilitating their buildings and machinery. Because they are now making money they are able to buy new equipment and machine tools for the first time in many years. Likewise, a good many workers are taking home sizable pay envelopes. What are they doing with this money? How are they spending it? This is an opportune time to teach people to spend some of their wages in rehabilitating themselves and thereby raising the health standard of the nation.

Dietitians, too, can be of inestimable value in starting campaigns to help national defense by sponsoring vocational training schools in the fields allied with their work. An apprentice course for hospital employees is certainly one of many needs, and the State Employment Service will cooperate in finding applicants. In fact, there has never been a better time to obtain public support in this work.

In sponsoring foods and nutrition courses in an industrial community, gear them to community needs, and insist that instructors be only those who have had practical training and experience. Industry wants the facts about nutrition and its employees need this knowledge. And remember that neglected opportunity never returns.

A NUTRITION LABORATORY

IRENE L. WILLSON[1]

At the first whispers of a new nurses' home, we began to plan what we hoped would be an ideal nutrition laboratory which would replace the old—a very crowded, inconvenient laboratory in the basement of the nurses' home. The new laboratory, which I shall describe, has now been in use for one series of classes and has proved to be very practicable.

[1] Chief Dietitian, Shadyside Hospital, Pittsburgh.

Since the room assigned for this purpose is quite narrow the working units had to be placed against the wall on three sides of the room and part of the fourth side. The remaining part of the wall is taken up with the entrance, and space for a refrigerator and hand sink. Each working unit resembles a small efficiency apartment kitchen, with a small stove, cabinet, sink and sufficient working space on the stainless metal tops of the cabinets.

One manufacturer had a complete unit which seemed almost perfect in every detail; however, a member of the hospital board wished to donate the small stoves so we planned our units around these stoves. The wall splashers and radiator covers are all of stainless metal. The sinks have swinging faucets and a hose connected in the back of the sink for rinsing dishes. Stainless metal towel racks are in the storage division of the cabinets. We were again fortunate in that a member of the women's auxiliary donated small equipment such as saucepans, double-boilers, flat silver, etc.

Because of limited space we decided to use card tables for serving meals. Gaily patterned china and attractive glass goblets and sherbets which the nurses delight in using, along with the cozy, homelike air of the room, make the nurses enjoy working in it.

We have two exhaust fans, a hand sink, a large wall blackboard, a bulletin board for posters, Venetian blinds and an instructor's desk with a stainless metal top and drawers on each side, which may also be used as a demonstration table. A group of wall cabinets serves for the storage of extra china and glassware.

Each cabinet in the individual units has the usual two drawers with cupboards below. The drawers contain: 1 egg beater, 1 spatula, 2 wooden spoons, 2 tablespoons, 2 teaspoons, 2 knives, 1 paring knife, 1 set measuring spoons, 1 small strainer, 1 lemon juice squeezer, 1 small tray, 1 lid for skillets and saucepans, 2 measuring cups, and 1 utility set (fork, knife and spoon).

The cupboards contain: 1 double boiler, 1 large strainer, 1 skillet, 2 saucepans (1 large and 1 small), 2 bowls, 1 flour sifter, 1 rolling-pin.

The one set of wall cabinets holds a dinner service and other equipment as follows: 3 dozen sherbets, 4 dozen small glasses, 4 dozen large glasses, 2 can-openers, 2 dozen cups, 2 dozen dinner plates, 4 dozen salad plates, 1 dozen saucers. Other equipment consists of a set of cans for flour, coffee, tea etc., 1 bread box, and 1 garbage can.

Practically the same type of unit, including a small

stove and refrigerator, has been placed in each of the floor kitchens of the nurses' home.

The auditorium is also equipped with wall cabinets, stainless metal-topped table, refrigerator and sink. The six-inch plates for serving tea are made with a little rim which is designed to prevent the tea-cup from sliding off. A dumb-waiter connects with the lounge on the balcony of the auditorium.

One other room of which we are proud is the nutrition clinic in the dispensary on the ground floor of the new building. The nutrition clinic is equipped with a large blackboard, a large bulletin board, a small refrigerator, and a hot plate on top of a combination work table and desk. Here we can teach and demonstrate the preparation of foods in the various clinics such as pre-natal, diabetic, etc.

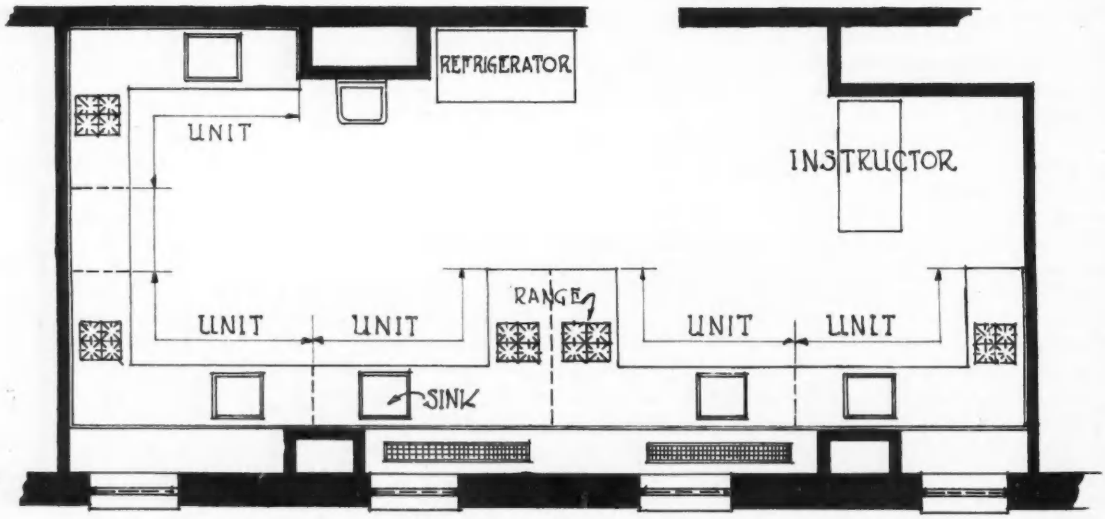

FIG. 1. Plan of Nutrition Laboratory, Nurses Residence, Shadyside Hospital, Pittsburgh, Pa. Press C. Dowler, Architect, Pittsburgh, Pa.

The equipment in the kitchens on each floor of the nurses' home contains the following dishes: eight $7\frac{1}{4}''$ plates, eight 7 oz. cups, one $11\frac{3}{4}''$ platter, eight 7 oz. saucers, one 13″ platter, two $9\frac{3}{4}''$ bakers; also stainless metal flatware as follows: 1 dozen teaspoons, 2 tablespoons, 1 dozen dinner forks, 1 dozen dinner knives. Miscellaneous articles, in addition, include 1 tea kettle, 1 set mixing bowls in sizes ranging from $5\frac{1}{2}''$ to $13\frac{1}{2}''$, 1 set refrigerator dishes with covers (3 piece, white enamel), 2 cans to store supplies (cocoa #2, sugar 10 lb.), 1 Ladd egg-beater, 1 bread box #1, one 10″ wooden spoon, 1 paring knife, 1 aluminum measuring cup #180, 1 coffee pot (Silex #6472) 1 glass juice extractor, 1 garbage can #36, 1 Wagner saucepan #2122, 1 Wagner cover #2222, 1 saucepan #$120\frac{1}{2}$ with cover, 1 saucepan #1421 with cover, 1 set utility knife and fork.

The kitchen in the auditorium has a stove, sink, refrigerator and cupboards, which contain the following equipment: 12 dozen punch cups, 2 large punch bowls, 2 punch ladles, 12 dozen cups and luncheon plates, 12 dozen teaspoons, and 12 dozen dessert forks.

EFFECT OF LONG-CONTINUED CONSUMPTION OF BRAN BY NORMAL MEN[1]

C. A. HOPPERT AND A. J. CLARK[2]

The increasing consumption of bran as an intestinal regulator warrants investigation of the properties of this food. It is well known that bran possesses bulk-forming properties[3] and may be safely used by physiologically normal persons. Preliminary experiments[4] have shown that one ounce of a processed bran[5] produces excellent laxation in physiologically normal humans. However, there are no published reports on the effect of bran over extended periods of time and in quantities greater than one ounce per day.

In the experiment here recorded, our object was to determine whether double the quantity of bran ordinarily used would be well tolerated over extended periods of time without evidence of functional habituation resulting in a diminution of the efficacy

[1] This work was supported by a grant from the Kellogg Company, Battle Creek, Michigan.

[2] From the Department of Chemistry, Michigan State College, East Lansing.

[3] Fantus, B., and Hirschberg, N.: Review of Gastroenterology 4: 277, 1941.

[4] Unpublished data. Michigan State College.

[5] The bran referred to and used throughout this experiment was "Kellogg's All-Bran," a processed wheat bran.

of the bran. We also wished to determine whether this large quantity of bran could be eaten without producing evidence of psychological disturbance, loss of body weight, or other clinical manifestations.

Experimental Period. Six young men from a group of graduate assistants in the Department of Chemistry at Michigan State College were selected as subjects because they were conversant with the nature and scope of the experiment, were believed to be able to keep trustworthy and accurate daily records, and were free from abnormalities, judged by physical examination. The subjects were placed on uncontrolled diets, supplemented by 2 oz. bran daily. All stools were carefully collected in suitable depositories. Accurate records were kept of the body weight of each subject, the number of stools per day, the initial weight, dry weight, moisture content and characteristics of the stools, together with the pyschological reactions and effect on appetite as a result of the daily ingestion of bran over a 30-week period.

TABLE 1

SUBJECT	INITIAL WEIGHT	FINAL WEIGHT	TOTAL NUMBER OF STOOLS	AVERAGE NO. OF STOOLS PER DAY	AVERAGE MOISTURE CONTENT OF STOOLS	CHARACTER OF STOOLS
J. L.	128	125	221	1	76.1	5 hard, others satisfactory
C. T.	198	201	376	2	77.9	All satisfactory
B. H. P.	176	182	395	2	77.7	All satisfactory
L. O.	163	162	214	1	74.5	3 hard, others satisfactory
S. C.	142	142	360	1.8	77.8	All satisfactory
R. M. W.	212	215	319	1.6	75.9	All satisfactory

The condensed data obtained in this study are presented in table 1.

Discussion. Examination of the weights of the subjects at the beginning and end of the 30-week experimental period indicates only small changes. One subject lost 3 lb. in weight, another, 1 lb., two gained 3 lb., one gained 6 lb. and one neither gained nor lost. These data indicate little effect on the weight of individuals as the result of increased laxation induced by the ingestion of 2 oz. bran daily.

Although the table does not give the detailed data, it was observed that the average number of stools per day remained substantially constant for a given subject throughout the 30-week period. Apparently the effect of bran on laxation does not change even after long-continued use.

The data obtained on the moisture content of the stools indicate that with few exceptions the values ranged from 70 to 80 per cent. Fluctuations were observed throughout the experimental period but there was no detectable change in the trend of these fluctuations. The average values given in the table show a slight but fairly definite relationship between the number of stools and the moisture content.

From the last column of the table it is seen that the number of stools classified as other than satisfactory were few. In fact, four of the subjects: B. H. P., R. M. W., C. T., and S. G. reported none but satisfactory stools throughout the 30-week experimental period. L. O. reported three hard stools (approximately 1.5 per cent) in a total of 214, while J. L. reported five (approximately 2.5 per cent) in a total of 221 stools. It is interesting to observe that these two subjects averaged only one stool per day, while all the others averaged two or slightly less than two. The slower rate of evacuation of L. O. and J. L. allowed the stools to remain in the distal colon for a longer time, which may explain the greater tendency toward occasional hard stools in these two subjects. However, considering the length of time covered by the experiment, the few cases of hard stools reported are insignificant. These data conclusively demonstrate that twice the usual quantity of bran produces satisfactory stools even after regular and long-continued use.

Conclusions: Two ounces bran daily has a pronounced and beneficial effect on laxation in humans. The improved laxation produced by the ingestion of 2 oz. bran daily during a 30-week experimental period resulted in no loss in body weight of the subjects. After regular and long-continued use, bran in twice the quantity ordinarily recommended produced no functional habituation and showed no apparent diminution in its laxative properties. Bran, in twice the usual serving, was well tolerated as a natural laxative.

CAMP WHITAKER FOR DIABETIC CHILDREN

ESTHER BOWLES[1]

Planning, preparing, and serving meals for approximately thirty diabetic children for a month at the annual camp sponsored by the University of California Medical School present many problems for a dietitian. Professional supervision of the camp makes feasible a vacation experience and opportunity for health teaching to diabetic children between the ages of seven and seventeen years. The staff of the camp, which was established in 1938, comprises a physician, two nurses, two recreation leaders, a craft instructor, a camp secretary, a camp assistant,

[1] B.S., University of Illinois; trained in dietetics at Kahler Corporation, Rochester, Minnesota; now dietitian at University of California Medical School, Pediatric Department, The Medical Center, San Francisco, California.

a dietitian, a cook, and three junior counselors who are also diabetics. The program includes swimming instruction, camp journalism, photography, crafts, baseball, folk dancing and camp-fire ceremonies, and special events such as a water carnival, a field meet, costume contest, picnic, and overnight trips.

The camp site at Whitaker Forest adjoins the General Grant Grove Section of Kings Canyon National Park. The camp is equipped with permanent headquarters, commissary and sleeping quarters. There is a camp-fire amphitheater, a large cement swimming pool, out-of-door dining room, and a boys' and girls' shower-house with hot water. The kitchen has a serving table which opens to the porch, two work tables, a good-sized pantry and an oil range. Four scales are included.

During the camp session in the summer of 1941 groceries and produce were brought in from a distance of about 65 miles. Trips were made only two or three times a week so that careful planning and purchasing were essential. Pasteurized milk was obtained in ten-gallon lots from a roadside store about eleven miles from camp. As the weather was fairly cool, food spoilage was not a major problem. A small ice box was used for insulin, meat and left-overs. Fruits and vegetables were kept in a large cooler fenced with wire netting. Milk was served in pitchers from the ten-gallon cans kept in the cold mountain stream which flowed through the camp.

Each child was maintained on the diet prescription submitted by his physician or clinic. Before the camp season these diets were reduced to a basic diet according to a plan devised in the Dietetic Department of the University of California Hospital. The differences between diets were made up with variations in the bread, butter, meat, and 18 per cent vegetable. An attempt to use 10 to 20 gm. wheat germ with the cereal in the higher protein diets was not well received. The diets were typed and mounted on 5 by 8-inch cards in the form which follows:

NAME	C:	P:	F:
Breakfast	*Lunch*		*Dinner*
Eggs ..... *	American cheese. *		Lean cooked meat *
Crisp bacon ..... *	(Lean meat) ..... *		Vegetable 3% 100
Cooked cereal ... 105	(Cottage cheese) .. *		Vegetable 9% 100
Fruit 12% 100	Vegetable 3% 100		Fruit 12% 100
Milk 240	Vegetable 3% 100		Milk 240
Bread ..... *	Fruit 12% 100		Bread ..... *
Butter ..... *	Milk 240		Butter ..... *
	Bread ..... *		
	Butter ..... *		

* Indicates that different weights were given to each camper. Food tables approved by the California Dietetic Association were used.

Breakfast was served at 7:30 a.m., lunch at 12:15, and supper at 6 p.m. Sometimes long before, but never tardily, once the bugler sounded the mess call, the campers lined up at the commissary for cards, trays, napkins and silverware. Cold plates were made up individually beforehand and labeled with the name of the camper. Most of the salads, desserts, and milk servings were of the same weight and were placed on the counter for the campers to put on their own trays. Slices of ready-cut whole wheat bread were found to weigh 25 gm. each; halves and fourths were added when necessary to make up individual figures. Butter was cut with a butter-slicer. Milk was poured into half-pint bottles. Cocoa was made with 120 gm. evaporated milk, 120 gm. water and 3 gm. sweetened cocoa. The assistance of several staff members was required for weighing up hot foods "on order." As each camper completed his tray it was checked by the dietitian who collected the cards, whereupon the camper took his tray to the open-air dining room. A "non-caloric" drink which resembled pink lemonade was served with or between meals, consisting of: lactic acid 8 cc., sodium hydroxide 10 cc., saccharin 0.24 gm. and water to make 30 cc. Two tablespoons of this solution were used in a quart of water and vegetable coloring added. Dinner menus sometimes were used at lunch and lunch menus at dinner, as the weather dictated. This switching of menus served to demonstrate to the campers that meals are interchangeable if the diet is divided into three equal parts.

Within reason, substitutions were made for foods which did not meet with approval. Those wishing substitutions were sent to the end of the serving line. If the dislike were real and not a whim, the objector would gladly wait his turn. The most frequent substitutions were of vegetables. Servings of one kind of fruit and one vegetable were kept in preparedness for substitutions each meal. There were many requests for low-carbohydrate vegetables in preference to others offering less bulk.

The counselors sat with the campers at meals to encourage social grace and curb those who habitually bolted food. The campers carried their own trays to the dishwashing unit and stacked their dishes.

Parents and visitors were fed with the staff members after the campers had left the dining room. Since surplus commodities such as raisins, rice, dried prunes, and corn meal were available for staff menus, the separate meal-time spared the staff the embarrassment of partaking of food not allowed in the diabetic diet. Several visitors brought melons which were a welcome addition to the camp menus.

Overnight trips were arranged so that each child had an opportunity to enjoy at least one excursion. All food and utensils for the trip were packed the night before. Lunches were packed in individual bags. Breakfasts and dinners were packed collectively with bread, butter, meat and fruit portioned out for each individual, the rest of the menu consisting of standard-size servings. Diet lists for

each child were carried by the counselors in charge of the trip. Favorite foodstuffs were bananas, apples, canned soup and peanut butter. For the two-day trips in which older, experienced campers participated, food was taken for the first three meals and that for the next three meals was sent on later.

At the conclusion of each two-week period a farewell dinner was served at which natural materials for table decorations, such as pine cones, moss, bark, and place cards of shellacked pine bark with colored "macaroni alphabet" names served to create a "party" atmosphere.

For the departing trip a supper bag was packed for each camper and staff member leaving on the "excursion." For campers on longer homeward treks two meals were packed.

Efforts to keep apace of rising food costs were materially aided by Federal Surplus Commodities which supplied oranges, evaporated milk, cereal, Lima beans, raisins, dried prunes, pie peaches, and fresh plums. Roasts were served on an average of three times a week. Fish consisted of fillet of sole, canned salmon, or tuna. About once a week Lima beans were used, with cold meat or American cheese added for the higher protein diets. There was no organized diet instruction but the campers showed real interest in their diets and often requested specific information. Those who wished were allowed to assist in calculating meals for the group.

Camp dietetics challenges the ingenuity of the dietitian, who, because of a sometimes uncertain food supply, may be called on to devise substitutes on short notice. Since meals must be served within a stated time after the administration of insulin, trays must be ready on schedule. Foodstuffs that can be prepared for self-service give the diabetic a better understanding of his diet. Variety in the diet stimulates the imagination of the camper and provides the incentive for him to learn to calculate his diet so that he can use substitutes accurately. The better satisfied he is with his diet, the better he will adhere to his régime. The real purpose of the diabetic camp is to aid the child in adjusting satisfactorily to the conditions imposed on him as a result of diabetes.

Insulin and Dextrose Tolerance

Apparently through the use of insulin a change has been wrought in the diabetic so that they may respond favorably to increased amounts of carbohydrate. This was not the rule but the exception in the preinsulin days. With the use of insulin, apparently a certain reserve for the utilization of sugar is built up which responds to the stimulus of added carbohydrate by increasing the dextrose tolerance. Without insulin the same occurs in normal persons, but this is not true of untreated patients with diabetes. . . . In mild diabetes in which insulin is not required, in some a low carbohydrate diet may serve to build up tolerance, while in others an optimal diet which may vary from 150 to 400 gm. of carbohydrate intake may serve that purpose. What seems to me particularly significant is the result obtained in cases of infections and hyperthyroidism. In these states characterized by more or less insulin resistance the effectiveness of insulin can be enhanced according to Greene and Swanson by the giving of high carbohydrate diets. The principle of satisfactory utilization of added dextrose in cases of both controlled and uncontrolled diabetes and of insulin resistant cases can be hailed as a step forward in the management of diabetes. There is no set diet which is most advantageous for any diabetic patient and it is a matter of trial and error to determine what shall be most beneficial. Diets low in carbohydrate are successful in controlling the carbohydrate metabolism of obese diabetic patients, higher carbohydrate diets are established as the most advantageous for growing children and for the manual laborer, while medium carbohydrate diets containing 130 to 150 gm. of starch are usually considered most suitable for sedentary workers.—*From discussion by Dr. H. O. Mosenthal — The utilization and effect of added dextrose in cases of controlled and uncontrolled diabetes, J. A. M. A., 118: 367, 1942.*

Book Reviews

Modern Bread From the Viewpoint of Nutrition. By Henry C. Sherman and Constance S. Pearson. New York: The Macmillan Company, 1942. Cloth. Pp. 118. Price $1.75.

In this timely book Dr. Sherman and his co-author point out that there are actually many different kinds of enriched bread and many gradations between the kinds officially distinguished. For instance, dried skim milk in breadmaking has added materially to the nutritional value of bread, likewise the use of vitamin-rich yeast, the retention or return of wheat germ to the bread dough, as well as the introduction of vitamins and minerals *au naturel* or as artificial concentrates.

Tradition and history characterize bread as the staff of life. Oil in modern warfare may seem predominant but wheat has been a basic need in other wars and ultimately, because it is necessary to the men who man the oil-fed machines, may be a deciding factor in this.

The authors assume a realistic, yet open-minded, attitude toward the problem. It is logical that the "nutritionally impoverished" bread prevalent from 1900 on, should give way to the "nutritionally modernized." In short, since the increased quantity of the new bread consumed may be assumed to displace foods of lower rather than higher vitamin and mineral values, such bread may now "safely be utilized to supply as much as 40 per cent" of the normal caloric intake. This procedure will tend to be physiologically as well as economically sound, even though it may constitute an "intermediate" step in nutritional desirability between the use of ordinary white bread and that in which the natural nutrients are retained.

The lay reader will be likely to find all of his questions concerning the "new" bread answered in this book. The dietitian and nutritionist will find the chapters on protein, mineral, and vitamin values, as these relate to bread, authoritative and unbiased.

Vitamins and Minerals for Everyone. By Alida Frances Pattee. Dr. Hazel E. Munsell, Technical Adviser. New York: G. P. Putnam's Sons, 1942. Cloth. Illustrated. Pp. 242. Price $2.

At first glance, it seems a little far-fetched to answer the query "Have you buoyant health?" thus, "Vitamins and minerals will give it to you." But after all, striking and emphatic phrases are needed in promoting good nutrition, and a diet adequate in minerals and vitamins is likely to be adequate in other essential nutrients. In fact, Miss Pattee hastens to explain further her opening statement.

This book, definitely, is the simplest, most graphic and complete book of its kind now available. With Dr. Hazel E. Munsell as technical adviser, it can be assumed that the figures and statements included are sound. Chapters are subdivided by such phrases as: Can We Store Vitamins in the Body? What Happens If We Do Not Have Vitamin A? What Does Vitamin B_1 Do for Us? The last mentioned, for example, is answered by short statements first; then points are driven home in the form of a story in which fictional characters converse with family physician, friend or relative.

Having "sold" her vitamins, Miss Pattee tells where and how to get them in terms of definite amounts of common foods; lists sources of the vitamins in the order of their descending potency, and elsewhere in alphabetical order for ease in reference; and follows very logically with a sample day's menu showing how one's vitamin quota may be met.

The same plan is followed for the minerals—iron, calcium and phosphorus. The appendix briefly summarizes the functions of other nutrients, includes the dietary "yardstick," meal suggestions, sample menus calculated for vitamin, protein, fat, carbohydrate, calorie and mineral values, and an extensive and complete table of nutritive values of foods according to weight and average servings.

Ann Batchelder's Own Cook Book. New York: M. Barrows & Company, Inc., 1941. Cloth. Illustrated. Pp. 232. Price $2.50.

Publishers have been known to over-estimate their offerings, but for the nonce their claim that Ann Batchelder's cook book "can be read in the parlor, used in the kitchen, cherished by the whole family," almost qualifies as an understatement. The content of this book from the pen of the versatile Miss Batchelder reveals her as essayist, poet, wit, inspired cook, and rural-minded philosopher. Obviously it's native talent that tells, for Miss Batchelder disclaims any orthodox educational background, either literary or home economic, for her several proficiencies. Her writing, nevertheless, commands respect, whether it be essay or recipe. Her essay "On the Hen" bespeaks a close and patently profitable study of this useful biped. That entitled "Thyme on My Hands" proves her intimate knowledge and love of gardens and plants, the while her facile pen looms lines of vivid beauty.

But this is primarily a cook book, even though the author says, characteristically, "You never expected me to do an orthodox cook book, did you?" To many a weary cook-reader, this very unorthodox quality of the book and its recipes will come like a refreshing spring tonic. After the stilted lines and the painful exactitude of the average college foods textbook, who will not relish: "Don't wash oysters. After all, you've got to believe in something." And while the recipes glorify cookery as an art, there is little doubt but that sufficient science has been mixed in for practical purposes.

Magic in Herbs. By Leonie de Sounin. With an Introduction by Miriam Birdseye, Extension Nutritionist, U. S. Department of Agriculture. M. Barrows & Company, Inc., 1941. Cloth. Illustrated. Pp. 207. Price $2.

This is a timely book and covers much more than its title indicates. Its author, a native of the Moravian-Slovakian

The Newer Concepts of Meat in Nutrition

Meat . . .
and the Diet in Infectious Disease

INTENSIFIED protein metabolism, characterized by increased nitrogen excretion and a tendency toward negative nitrogen balance, invariably accompanies infectious disease. The severity of the process parallels, in general, the degree of pyrexia, but it usually persists for several days after the temperature returns to normal.

If tissue destruction secondary to excessive nitrogen catabolism is to be prevented during the course of infectious diseases, the protein intake must be increased sufficiently to maintain nitrogen equilibrium.

It has been shown that tissue wastage can be minimized through the influence of a diet rich in proteins and high in caloric value.[1] Perla and Marmorston[2] recommend 2 grams or more of proteins as well as 50 or more calories per kilogram of body weight daily in order to lessen or prevent destruction of body proteins.

Meat, a rich source of all the essential amino acids, is especially suitable for such diets. Of added advantage are its significant amounts of thiamine, riboflavin, nicotinic acid, and of the essential minerals iron, copper, and phosphorus. Its easy digestibility and stimulating influence on gastric secretion help to increase the food consumption of the patient.

1. Coleman, W., and Du Bois, E. F.: Clinical Calorimetry. VII Calorimetric Observations on the Metabolism of Typhoid Patients With or Without Food, Arch. Int. Med. *15*:887, 1915.

2. Perla, David, and Marmorston, Jessie: Natural Resistance and Clinical Medicine, Boston: Little Brown & Co., 1941.

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CHICAGO

part of old Bohemia, spent her youthful days steeped in the lore of culinary thrift and housewifely arts which included the garnering and use of herbs. To Madame de Sounin, herbs offer "a touch, an accent, a great charm to foods." She divides them into the "fine" and the "robust," terms which are self-explanatory, and then details the special characteristics and uses of each. Like a painter with his palette, the author shows how one herb can be toned with another, the tender flavor of chervil, for instance, needing the support of basil, or chive, or of one of the more "robust" herbs.

Spices and berries, too, enrich the book's content, and equipped with these and a garden of herbs, the author proceeds to initiate the reader into the mysteries of herb butters and unusual sauces. She then goes on to vegetables, so often superficially if not cruelly treated, and tells how cabbage, celery root, oyster and eggplant, among other usually mistreated vegetables, can be magically transformed into a dish for the gods. Ancestral thrift permeates the pages, for the author rarely neglects to tell what to do with the water in which the vegetables are cooked or to urge that potatoes be boiled *always* in their jackets.

There are separate chapters on meats, poultry and game, fish, menus and special soups. In these, too, we find ideas which will refresh a weary cuisine: a marinade for veal, a bouillabaisse adapted for American kitchens, and bouillons and soups both delicate and substantial. A chapter follows on the author's menu demonstrations and a word should be said for the exquisite quality of the luncheon and dinner menus, all of which are distinctly continental in flavor without being conventionally so. At this point, obviously, the author realized that her readers, willy-nilly, would be won, for she closes with full directions for a kitchen herb garden.

Diabetes Mellitus. By Zolton T. Wirtschafter, M. D., Clinician in Charge, Clinic for Diabetes, Mount Sinai Hospital, Cleveland, and Morton Korenberg, M. D., Former Fellow, May Institute of Medical Research, The Jewish Hospital, Cincinnati. Baltimore: The Williams & Wilkins Company, 1942. Cloth. Pp. 186. Price $2.50.

This is an ambitious, if not a revolutionary book on diabetes mellitus. It is implied that great differences of opinion have complicated the treatment of this disease (or condition, if you will), but if so, it is an exaggeration to say that "the numerous theories and diverse methods of treatment have left both the student and the practitioner hopelessly bewildered." These, to put it mildly, are strong words in this day of widespread bewilderment. Certainly, the treatment of diabetes mellitus seems far less in a state of flux than certain other therapies.

In any event the authors have presented a passable review of past and existing methods and theories, including those graced by the term historical, and those concerning insulin, glycogenesis and glycogenolysis, ketosis, the relationship between metabolism of sugar and that of phosphorus, and the mechanics of maintaining acid-base equilibrium. They continue with a discussion of glucose tolerance tests which, if to be worthy of interpretation as indicating ability to utilize carbohydrate, must be preceded by several days on an "adequate diet."

The chapters on glycosuria can be read with profit at least by dietitians who may not be fully aware of the other diseases and conditions which give rise to glycosuria. Likewise, the authors' contention that vitamin C is one of the necessary factors concerned in the deposition and storage of adequate glycogen in the liver may be illuminating, along with that concerning the effect of the endocrines on carbohydrate metabolism and insulin requirements. Truly, when the sum total of possible interrelationships is viewed, the result therefrom can be, as the authors say, "of magnificent proportions."

The "organ systems" as these relate to diabetes are next reviewed, followed by a down-to-earth chapter on diabetes mellitus which covers incidence, symptomatology, and treatment. The authors acknowledge the assistance of Helen Mallory and Bessie Wallace of the Dietetic Department of Mount Sinai Hospital, who outlined the diets included.

Basic Principles in Dentistry. By Victor G. Sears, D.D.S. Formerly Professor of Prosthetic Dentistry, New York University. New York: Pitman Publishing Corporation, 1942. Cloth. Illustrated. Pp. 195. Price $3.50.

In an interesting chapter on the stamina of the tissues, it is said that the jaws are in a state of constant change, a change which is metabolic and "too often, also anatomic." Both soft and hard tissues, except in the teeth, are continually losing and replenishing the chemical elements of which they are constituted. Thus a disturbance of metabolism may so alter tissue resistance to external pressure that a "dental restoration" (store teeth to you), entirely suitable at the time of insertion, may become a source of trouble due to tissue changes. Dissatisfaction, therefore, with dental restorations may be caused by lowered physical vitality, rather than faulty construction of a plate.

The "problem of bodily nourishment is of particular interest to the dentist. Rapidly resorbing ridges can be benefited by suitable diet" in the same way as can rickets, beriberi and pellagra. This, in short, gives some idea of the scope of this author's views concerning diet as it relates to dentistry. No indication is given of his views, if any, concerning diet in preventative dentistry. The presentation is concerned on the whole with artificial means of correcting either physical neglect or what some may believe to be hereditary shortcomings.

Food Values of Portions Commonly Used. By Anna de-Planter Bowes. Fourth edition. Philadelphia Child Health Society, 311 South Juniper Street, Philadelphia, 1942. Paper. Pp. 35. Available from author. Price $1.

Since its first publication in 1937 this booklet has been kept up to date by Mrs. Bowes. The principal changes in the present edition include an increase in the number and kinds of foods listed in various groups; new data on mineral values of many foods; the expression, in micrograms, of values for thiamin and riboflavin and the addition of values for nicotinic acid, expressed in milligrams, in foods for which these figures are available; additions to the section concerned with effects of various methods of cooking and preserving on food values; addition of a statement on nutritionally improved or enriched foods; and substitution of the Recommended Daily Allowances for Specific Nutrients for the table on page 7 of the third edition.

Desirable features in the earlier editions have been retained and the tabular material, arranged in an exceedingly legible form, continues to be complete as far as our present knowledge extends.

A Guide for Evaluating Contributions from Responsible Relatives. Compiled by the New York Budget Council, 105 East 22nd St., New York, 1942. Paper. Pp. 11. Price 20 cents.

This booklet, as its title implies, aids in determining the extent to which responsible relatives can contribute in whole or in part to the support of persons applying for or receiving assistance. Committee members preparing the material represent the leading private and public social welfare agencies in New York and its environs. The content covers all items of expense: shelter, fuel, electricity, medical care and even income tax, and represents a tremendous amount of careful work on the part of those who assisted in the preparation of the guide.

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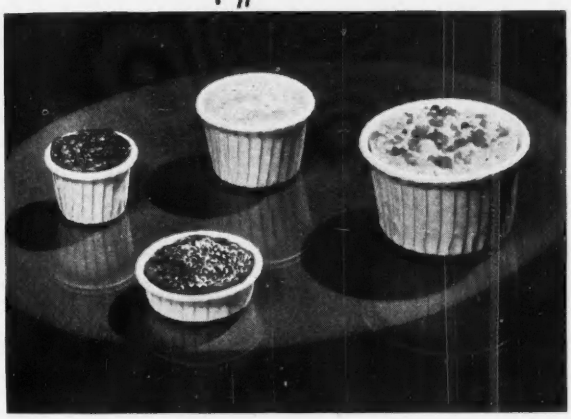

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Current Literature

AMERICAN JOURNAL OF DIGESTIVE DISEASES

Vol. 9, January 1942

A clinical and laboratory study of plasma lipids in obstructive jaundice and several types of hepatic disease. C. A. Jones.—p. 1.
*The genesis of pellagra, pernicious anemia and sprue. S. Harris and S. Harris, Jr.—p. 29.
*The effect of food upon the sphincter of Oddi in human subjects. G. S. Bergh.—p. 40.
*Porphyrinuria in the aged. H. A. Rafsky and B. Newman.—p. 43.
*Some of Great Britain's nutritional problems during this war. Editorial. —p. 47.

Pellagra, Pernicious Anemia and Sprue. Pellagra, pernicious anemia and sprue are distinct and separate disease entities. Liver and liver extracts, of which nicotinic acid is an ingredient, are the most effective treatment for all. Liver pathology is found almost constantly in pellagra and pernicious anemia and to a less extent in sprue. These three related conditions appear to be allied nutritional diseases.

Effect of Food Upon the Sphincter of Oddi. A fatty meal of egg yolks and cream produced relaxation of the sphincter of Oddi in 34 human subjects. Olive oil had little effect. Following a protein meal, relaxation occurred only a quarter of the time. A carbohydrate meal did not produce a significant effect upon the sphincter resistance.

Porphyrinuria. In a series of 100 so-called normal, aged individuals, 43% had porphyrinuria. This is considered to be due to nicotinic acid deficiency.

Britain's Nutritional Problems. England is now making a great effort to secure from abroad those foods which will occupy the least space in the ships and also give maximum calories and protection from deficiency diseases. Wheat, fats, dried milk, dried eggs and dried fruits are being shipped to England. Lawns and parks are being used to grow potatoes which yield the greatest number of calories per acre. Many poor children are undoubtedly undernourished. When given milk, butter, cod liver oil, eggs, vegetables and fruit, they improve physically and mentally.

AMERICAN JOURNAL OF THE MEDICAL SCIENCES

Vol. 203, January 1942

*Studies of the B vitamins in the human subject. III. The response of cheilosis to vitamin therapy. T. E. Machella.—p. 114.

Cheilosis. Cheilosis is not necessarily a manifestation of riboflavin deficiency alone. Healing may not occur when riboflavin is administered and may respond favorably to pyridoxine or nicotinic acid. When the lesion is hemorrhagic and accompanied by generalized involvement of the lips, it may improve only when a low blood ascorbic acid level is elevated.

Contributed by Colleen Cox Hambleton, Food Utilization Division, Bureau of Home Economics, U. S. Department of Agriculture, Beltsville, Maryland.

AMERICAN JOURNAL OF PUBLIC HEALTH

Vol. 31, December 1941

*War and health in Britain. W. Jameson.—p. 1253.
*Nutrition in relation to pregnancy and lactation. J. E. Becker, H. J. Bickerstaff and N. J. Eastman.—p. 1263.
*Two years' experience in a nutrition program for national defense. F. F. Tisdall.—p. 1289.

Health in Britain. Only certain foods such as meat, fats, cheese, tea, sugar and jam are rationed in Britain. Expectant and nursing mothers and children up to the age of 18 are given priorities for milk. A national wheatmeal loaf, made from 85% extraction flour, is marketed at the same price as white bread. Vitamins A and D are added to all margarine. Because of the difficulties in the distribution of foodstuffs, communal feeding is being extended. There is no evidence that the British people are suffering seriously from malnutrition.

Nutrition in Pregnancy. Sound dietary advice and practices throughout pregnancy and lactation are important and necessary. Almost every pregnant woman is sufficiently interested in her own health and that of her child to be willing to follow any practice that will lessen the hazards of pregnancy and aid in the building of a fine baby. If one is accustomed to eating nutritious and easily digestible food in properly balanced proportions, no change in dietary routine is necessary during pregnancy. A detailed dietary history taken several times during this period, followed by suggestions and help in the making of necessary changes, is as important a procedure in the management of pregnancy as the physical examination and medical history.

Nutrition Program. National surveys in Canada indicate that a considerable part of the population is not consuming a diet adequate for health. While this condition may be due in some measure to low income, lack of knowledge of the principles of nutrition is an important factor. Nutritional education work is being actively carried out.

ANNALS OF INTERNAL MEDICINE

Vol. 16, January 1942

A study of the hereditary nature of gout: a report of two families. C. J. Smyth and R. H. Freyberg.—p. 46.
*Protein derivatives as factors in allergy. R. A. Cooke.—p. 71.
A theory concerning the manner in which the stomach empties itself. W. T. Gibb.—p. 94.

Allergy. Nutritional or deficiency disturbances are found in persons exhibiting manifestations that are attributed to allergy. Histamine, proteose and nucleic acid are discussed.

ARCHIVES OF INTERNAL MEDICINE

Vol. 69, January 1942

*Effect of estrogen on the utilization of the vitamin B comple::. J. Ashworth and D. C. Sutton.—p. 15.

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Vitamin B Deficiency. The administration of estrogens to persons with a subclinical vitamin B-complex deficiency may cause polyneuritis, pellagra or cheilosis. Estrogens appear to increase the demand for or to suppress the utilization of the vitamin B-complex.

CANADIAN MEDICAL ASSOCIATION JOURNAL

Vol. 46, January 1942

*Nutrition in pregnancy. J. H. Ebbs, W. A. Scott, F. F. Tisdall, W. J. Moyle and M. Bell.—p. 1.

*The influence of improved prenatal nutrition upon the infant. J. H. Ebbs, A. Brown, F. F. Tisdall, W. J. Moyle and M. Bell.—p. 6.

Nutrition in Pregnancy. Milk, eggs, tomatoes, oranges and cheese were supplied to 90 of the 400 women in this study from the fourth or fifth month of pregnancy until after discharge. There was a much higher incidence of miscarriage, stillbirths, premature births and minor complications in women eating poor diets throughout pregnancy. The diet needs of the expectant mother are recorded.

Prenatal Nutrition. The addition of certain simple foods of the diets of a low-income group of women resulted in a lowered infant mortality during the first 6 months of life and a much lower incidence of illness. Even the appearance of the infants was strikingly better.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

Vol. 118, January 3, 1942

Studies in nicotinic acid metabolism. V. A test for nicotinic acid deficiency in man. W. A. Perlzweig, H. P. Sarett and L. H. Margolis.—p. 28.

*The treatment of peptic ulcer without alkalis. G. F. Dick and C. W. Eisele.—p. 38.

Detection of early ocular changes in avitaminosis A. Current comment.—p. 54.

Vol. 118, January 10, 1942

*Calcium and the metabolism of lead. Editorial.—p. 142.

Vol. 118, January 24, 1942

*Vitamins for gray hair. Editorial.—p. 302.

Ulcer. Under hourly treatment with milk and cream without the use of alkalis, the speed of healing of gastric and duodenal ulcers compares favorably with that under other methods of treatment. There was a prompt disappearance of symptoms, absence of occult blood in the stool and a disappearance of the x-ray crater in a series of 41 patients.

Calcium and Lead. Paint pigments, tetraethyl lead in motor fuels, and spray materials used on fruits and vegetables are a few of many possible sources of exposure to lead under ordinary living conditions. Practically all the body tissues contain measurable amounts of lead. There is a similarity between the distribution and mobilization of lead and that of calcium and phosphorus. Lead is transported in the blood as the secondary phosphate but is deposited in the bones as the insoluble tertiary phosphate. It is stored in the traveculae of the long bones, as is calcium. Solution of parathyroid will mobilize this lead and calcium in a parallel manner. Lead and calcium are strikingly similar in their metabolism. The mobilization of lead already deposited in the bones shows a striking parallel to the mobilization of calcium. The absorption of lead from the intestine is influenced by the level of calcium in the diet. The deposition of lead in the bones appears to take place in inverse relation to that of calcium. An adequate intake of calcium and phosphorus presumably tends to protect the body against the assimilation of the small amounts of lead that are unavoidably taken into the gastro-intestinal tract under ordinary conditions.

Gray Hair. A diversity of opinion still prevails about the relation between diet and graying of hair in animals. Black rats become gray in 4 to 6 weeks when fed a diet deficient in pantothenic acid, 100 micrograms of which daily will prevent or cure this condition. Para-aminobenzoic acid is ineffective. The evidence in behalf of some definite relationship between intake of vitamins and graying of hair is far more convincing for pantothenic acid than for para-aminobenzoic acid.

JOURNAL OF BIOLOGICAL CHEMISTRY

Vol. 142, January 1942

Cystinuria. The effect of various amino acids on the excretion of cystine. W. C. Hess and M. X. Sullivan.—p. 3.

*The biochemical defect in choline-deficient rats. H. P. Jacobi and C. A. Baumann.—p. 65.

*Studies on anemia in dogs due to pyridoxine deficiency. J. M. McKibbin, A. E. Schaefer, D. V. Frost and C. A. Elvehjem.—p. 77.

*The response of lipid metabolism to alterations in nutritional state. II. The effects of overnutrition on the postabsorptive levels of the blood lipids of the dog. C. Entenman and I. L. Chaikoff.—p. 129.

*Carbohydrate metabolism in thiamine deficiency. H. A. Harper.—p. 239.

*Isolation of an antibiotin factor from egg white. D. W. Woolley and L. G. Longsworth.—p. 285.

The threonine, serine, cystine, and methionine content of peanut proteins. W. L. Brown.—p. 299.

*The metabolism of vitamin B_6. J. V. Scudi, R. P. Buhs and D. B. Hood.—p. 323.

Studies in nicotinic acid metabolism. III. Metabolism and synthesis of nicotinic acid in the rat. J. W. Huff and W. A. Perlzweig.—p. 401.

*Influence of some dietary factors on the development of rancidity in the fat of the white rat. A. Overman.—p. 441.

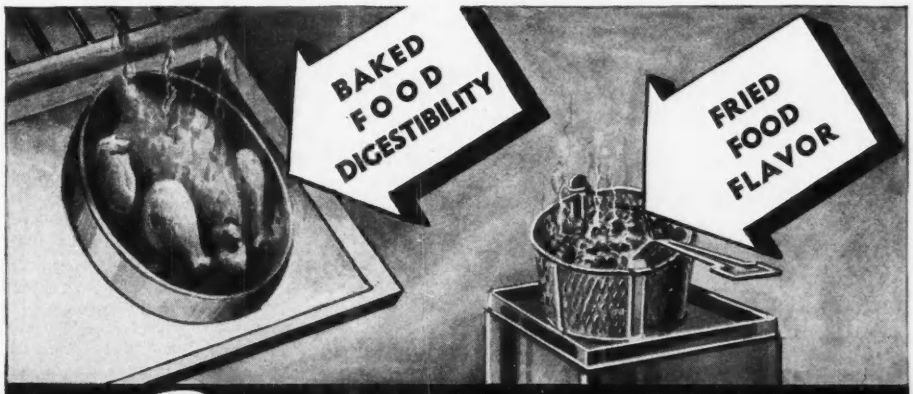
Choline-Deficient Rats. The choline content of rats with symptoms of "choline deficiency" was slightly greater than normal. Hemorrhagic kidneys contained more choline than normal kidneys. Choline synthesis proceeded normally during the critical period when deficiency symptoms develop. Symptoms of "choline deficiency" are due to the lack of a methyl-containing essential other than choline itself. The choline content of rats remained essentially normal on diets low in "labile methyl," diets low in fat, or diets containing sodium selenite. Young rats on a diet low in methionine developed kidney hemorrhage which could be prevented by choline. Rats grew to maturity and reproduced on a synthetic diet free of choline.

Anemia Due to Pyridoxine Deficiency. The blood plasma iron is abnormally high in anemia due to pyridoxine deficiency in dogs. It drops to a low normal level during the remission under pyridoxine therapy. Total blood copper values are at a low normal level during the anemia and increase to normal during such therapy. The immediate stimulation in blood formation afforded by pyridoxine therapy may be overcome by addition of liver extract to the ration.

Lipid Metabolism. When dogs increased their weights by 80% there was little or no rise in the total cholesterol content of the blood. There was a tendency for total fatty acids and phospholipids to rise. Fasting produces a more pronounced fall in the blood lipids in the obese dog than in the dog of normal nutritional state.

Carbohydrate Metabolism. Carbohydrate metabolism *in vivo* was studied in animals reduced to a subacute state of thiamin deficiency. There was decrease in the rate of absorption of glucose from the intestine and the extent of hepatic glycogenesis as well as the rate of glycogenolysis. This subacute state of thiamin deficiency did not alter the ability of the animal to convert orally administered 1(+)-sodium lactate or sodium pyruvate into hepatic glycogen. In the thiamin-deficient animals, glucose was superior as a ketolytic agent or the reduction of an endogenous ketonuria produced after high-fat diets.

Antibiotin Factor. An antibiotin factor, a basic protein which combines firmly with biotin, has been isolated from egg white.



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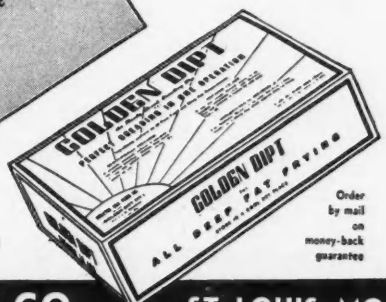

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Metabolism of Vitamin B_6. Both man and the dog excrete large amounts of ingested vitamin B_6 in the urine in the form of a conjugate; the rat does not. A second excretion product has also been detected in the urine of man and the dog, and to a lesser extent, in rat urine. The excretion of unchanged vitamin B_6 in the dog has been confirmed by isolation.

Effect of Diet on Rancidity of Fat. In rats fed a synthetic diet one group received no supplement, while a second received 1 mg. ascorbic acid daily and a third, 1 mg. hydroquinone daily. The fats were analyzed for rancidity at stated intervals. Results indicate that the differences in resistance to rancidity are due partly to thinness or fatness of the animal, and partly to the diet. Ascorbic acid feeding, together with a low per cent of gain in weight, resulted in a significant increase in resistance of the fat to rancidity.

JOURNAL OF NUTRITION

Vol. 23, January 10, 1942

*The utilization of the calcium of carrots by adults. H. Breiter, R. Mills, E. Rutherford, W. Armstrong and J. Outhouse.—p. 1.

*The occurrence of free and bound biotin. J. O. Lampen, G. P. Bahler and W. H. Peterson.—p. 11.

*Studies in nicotinic acid metabolism. I. The fate of nicotinic acid in man. H. P. Sarett, J. W. Huff and W. A. Perlzweig.—p. 23.

*Studies in nicotinic acid metabolism. II. The fate of nicotinic acid in normal and black tongue dogs. H. P. Sarett.—p. 35.

*Pantothenic acid in the nutrition of the rat. L. M. Henderson, J. M. McIntire, H. A. Waisman and C. A. Elvehjem.—p. 47.

*Distribution of vitamin E in the tissues of the rat. K. E. Mason.—p. 71.

*Choline metabolism. VIII. The relation of cystine and of methionine to the requirement of choline in young rats. D. J. Mulford and W. H. Griffith.—p. 91.

Utilization of Carrot Calcium. Two levels of calcium were fed to 4 women and 3 men, one averaging 270 mg. daily, the other 449. The same basal diet was fed throughout the experiment, the higher level having been brought about by the daily ingestion of 700 mg. carrots. The amount of carrot calcium utilized was 17.6, 8.9, 12.9, 0.0, 33.5, 9.2, and 11.4%, averaging 13.4. Five of the subjects showed poorer utilization of carrot calcium than they did of milk calcium in a previous study.

Free and Bound Biotin. The biotin of yeast and animal products occurs primarily in a water-insoluble firmly-bound combination. Increases of from two to sixty-fold occurred on hydrolysis. Vegetables, green plant materials and fruits contain a water-extractable form, while seeds and nuts have considerable amounts of bound biotin.

Nicotinic Acid Metabolism in Man. Trigonelline and nicotinuric acid are the two known end products of nicotinic acid metabolism found in human urine. For a study of normal trigonelline excretion in man, a diet free of coffee, peas, beans and other legumes is necessary. On such a diet three individuals excreted 9 to 13 mg. per day. On less rigorously controlled diets, 26 students excreted an average of 15 mg. trigonelline per day. There is a constant loss of at least 10 mg. of known nicotinic acid derivatives in the urine daily, regardless of diet. Of 200 mg. oral doses of nicotinic acid, 25 to 90 mg. could be accounted for by the increase in urinary trigonelline and nicotinuric acid. Trigonelline accounted for 55 to 84% of this increase. The remainder was nicotinuric acid. Trigonelline is not utilized by man when taken orally, and is excreted almost completely as such.

Nicotinic Acid Metabolism in Dogs. Trigonelline and nicotinuric acid are the main end products of nicotinic acid metabolism found in dog urine. The urinary excretion of trigonelline falls to 1.1 to 2.7 mg. per day on a low-nicotinic acid diet, and to 0.1 mg. in the blacktongue dog. On the low-nicotinic acid diet or in blacktongue several 25 mg. doses of nicotinic acid are required before the dog will excrete part of the dose. On a high nicotinic diet (1.1 mg. per kg.) dogs excrete a total of about 7 mg. of the 12 to 15 mg. they ingest daily. Over 90% of this is in the form of trigonelline. Neither trigonelline nor nicotinuric acid can be utilized by the dog.

Pantothenic Acid. Rats fed a synthetic ration deficient in pantothenic acid became gray in 4 to 6 weeks. Levels of calcium pantothenate above 40μ g. per day prevented or cured this condition. The rate of growth paralleled the level of pantothenic acid intake up to 80μ g. per day. The daily requirement for the growing rat is approximately 100μ g. calcium pantothenate per day. Rats fed a heated grain ration showed graying which was likewise prevented and cured with synthetic calcium pantothenate. Copper deficiency caused a graying which did not respond to pantothenic acid but was rapidly cured by administration of copper. p-Aminobenzoic acid was entirely ineffective against the graying produced in rats by feeding a synthetic ration.

Vitamin E Distribution. A total of 338 bio-assay tests on tissues of rats receiving approximately 4100 and 10,000 times the minimal daily requirement of vitamin E reaffirms its wide distribution in the animal body. At the low level of intake the heart, lung and spleen possess almost twice as much vitamin E per gram fresh tissue as the musculature, body fat and other visceral organs and about 4 times as much as the liver. At moderately high levels of intake the storage in the viscera, musculature and body fat is augmented 3 to 4.5 times; the heart, lung and spleen receiving more than other tissues, while that in the liver is increased about 14 times. The mammary gland concentrates about twice as much E as the liver. At excessively high levels of intake the musculature and liver, respectively, possess about 12 and 150 times the vitamin E storage occurring at the low level of intake. Liver content of the vitamin affords the most useful measure of the previous intake and storage. Despite the wide distribution of vitamin E in the body of the rat, the estimated total storage represents but a small fraction of the vitamin ingested, confirming the suggestion that the tocopherol molecule is either ineffectively absorbed or readily broken down in the organism.

Cystine, Methionine and Choline. Supplementary cystine or methionine improves the growth of and the efficient utilization of food in young rats on an 18% casein diet. The deposition of liver fat and the incidence of renal hemorrhagic degeneration in young rats on a low-choline diet are increased by supplements of cystine which improve the nutritive value of the diet. Larger supplements have no effect on the requirement of choline. In the absence of dietary choline, 30% of casein is required to supply sufficient methionine and cystine for the prevention of signs of choline deficiency. Methionine which is needed and used as a source of labile methyl is not utilizable as a source of cystine sulphur.

OHIO STATE MEDICAL JOURNAL

Vol. 38, February 1942

Teaching nutrition to people who take their noonday meals out. A. H. Smith.—p. 117.

PUBLIC HEALTH REPORTS

Vol. 57, January 9, 1942

*The sanitation and bacteriology of public eating utensils. An investigation of public eating and drinking establishments in Providence, R. I. M. P. Horwood and P. J. Pesare.—p. 33.

Public Eating and Drinking Utensils. A sanitary survey of public eating places, together with bacteriological examination of dishes and eating utensils, serves as an excellent basis on which to formulate an effective campaign of education leading to improvement in sanitation. Managers and

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employees of eating and drinking establishments are ignorant of accepted sanitary requirements and procedure. The temperatures of wash and rinse waters are universally too low to ensure the effective disinfection of eating and drinking utensils. E. coli, A. aerogenes, hemolytic streptococci and staphylococci may be carried by eating utensils. Few of the organisms associated with Vincent's angina are able to resist the customary dishwashing procedures when the infection is not prevalent in epidemic form. The use of chlorine compounds for the disinfection of beverage glasses under controlled conditions can be made practical and effective in providing clean and relatively sterile glasses in public drinking places.

SCIENCE

Vol. 95, January 2, 1942

*The quantitative relationship of riboflavin to cataract formation in rats. H. M. Baum, J. F. Michaelru and E. B. Brown.—p. 24.

Vol. 95, January 23, 1942

*"Pepsitensin"—a hypertensinlike substance produced by peptic digestion of proteins. H. Croxatto and R. Croxatto.—p. 101.

Mechanism of p-aminobenzoic acid action and the parallel effects of ethyl carbamate (urethane). F. H. Johnson.—p. 105.

Vol. 95, January 30, 1942

*Pyridoxine as a growth factor for graphium. P. R. Burkholder and I. McVeigh.—p. 127.

Riboflavin and Cataract. Rats on a ration devoid of riboflavin do not exhibit cataract. Minute amounts of this vitamin induce cataract formation and rations containing more nearly adequate amounts are non-cataractogenic. There is a lack of curled toe paralysis except when small amounts of riboflavin are present.

Pepsitensin. A substance similar to hypertensin as to physiological, physical and chemical properties can be derived from hypertensinogen by incubation with pepsin. The term "pepsotensin" seems appropriate for the new substance.

Pyridoxine. Pyridoxine is known to be essential for the growth of excised plant roots, for certain strains of neurospora, and for the G.M. strain of yeast. This accessory growth factor is also necessary for the life of a fungus which causes Dutch elm disease.

INSULIN HYPOGLYCEMIA:

CHANGES IN NERVOUS MANIFESTATIONS

Changes in the symptomatology of insulin hypoglycemia in diabetics commonly occur as years of treatment go on, to such a degree in some cases that patients are dangerously unaware of the onset of insulin reactions. At first, patients almost invariably feel and easily recognize minor prodromal symptoms, ascribable mainly to the autonomic nervous system and akin to the effect of a dose of adrenaline. They are probably due to an extra secretion of adrenaline produced in an attempt to mobilize stored glycogen into blood sugar. Such symptoms comprise general weakness and faintness, tremors, sweating, hot or cold feelings, and palpitation. Other early symptoms are hunger pains, visual disturbances including diplopia, and tinglings, especially of the lips and tongue. Such symptoms occur at definite times, at the period of maximal insulin action; they are removed by eating 1–3 lumps of sugar. They indicate clearly that the blood sugar is between 50–70 mg. per 100 ccm. Should such symptoms be unrecognized or neglected, so that glycopenia persists a long time, symptoms develop which may be ascribed to disturbed function of brain and central nervous system: mental confusion, muscular twitchings, convulsions, transient hemiplegias, comas, etc. These effects usually rapidly disappear on restoration of blood sugar; but they may persist longer, especially if hypoglycemia has lasted for one or more hours, and, rarely, there is permanent hemiparesis or mental impairment with definite histological changes in the nerve cells. A few patients experience the more serious group of symptoms from the start. Yet considering the large number of stupid or careless patients on insulin treatment, serious attacks or sequelae are rare indeed. After some years, the type of insulin reaction generally changes, the premonitory autonomic symptoms are lacking and the patient proceeds directly to the more serious central nervous system manifestations. This applies both to diabetics who have been continuously on unmodified insulin and to those who have been changed to protamine insulin, whose slower, more prolonged action often modifies the type of reaction. A patient, instead of becoming shaky, sweating or hungry if his meal is delayed, becomes suddenly confused and obstreperous, and refuses sugar. Another patient driving a car and usually warned of hypoglycemia by slight diplopia becomes suddenly wild and unbalanced in his driving. Another, instead of being awakened at night by violent palpitations, goes straight into convulsions and awakens so paralyzed that he cannot reach his sugar. The same patient may experience premonitory symptoms at one time and not at another. The explanation for this change in symptomatology is hard to discover. The author has noticed how at the beginning of insulin treatment patients feel hypoglycemic symptoms at a higher blood sugar level than later on. Perhaps the tissues become attuned to a lower level of sugar concentration. But the condition described here occurs in patients who are often hyperglycemic and only rarely hypoglycemic. When prolonged, the central nervous system suffers interference in its vital function because sugar is its only fuel. The higher cortical functions and centers suffer first and most severely. . . . The urine of such diabetics should never be made continuously sugar-free. If sugar-free at the time of minimal insulin activity, after breakfast for example, there is an almost certain risk of hypoglycemia at the period of maximal insulin action. He [Dr. Lawrence] suggests the regular administration of a large carbohydrate buffer (20–30 gm.) before the latter period. With soluble insulin, it should be given 3 hours after each injection; and at tea-time after protamine insulin, and at bed-time.—*Abstracted by M. B. J. from paper by R. D. Lawrence, M.D., F.R.C.P., Lancet, 241: 602, 1941.*

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ELECTRIC MEAT, FISH AND BONE CUTTER

The "Jim Vaughan" is gaining popularity among leading dietitians. There are many reasons why this modern piece of equipment is rapidly taking its place in the hospital kitchen.

The Saving of Meats. The uniform and controlled cutting of meats, fish, and other meat products on "Jim Vaughan" result in equal and more portions. Users claim savings of 5 to 20% on their meat bills.

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"Jim Vaughan" Cuts Many Foods, beef, veal, lamb, pork, fish, bones, or poultry. Besides such meats, "Jim Vaughan" also is extensively used on many other products to cut them into uniform portions.

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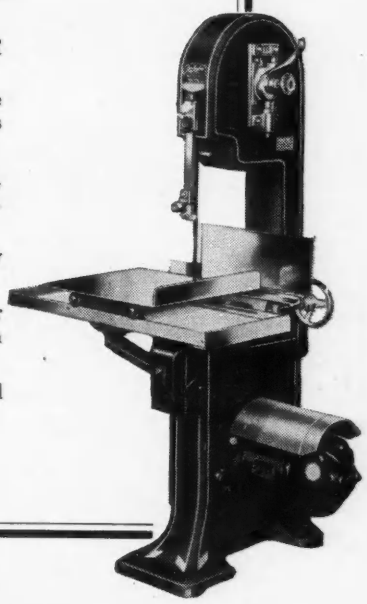

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A practical guide for feeding children from birth to maturity with adequate diets for all ages, body-builds and temperaments

A comprehensive handbook of modern methods of nutrition for individualized rearing of newborns, infants, children and adolescents. It summarizes the latest advances in nutrition and applies them simply and effectively, not only to maintain mere well-being, but to achieve higher levels of growth and development. The book is right up-to-the-minute with chapters on all aspects of nutrition adapted to everyday application for all types of children. Even wartime restrictions, food rationing and community feeding are considered in the planning of optimal but economical diets for attaining the desired nutritional goals. Modern nutrition can become a potent force in transforming the feeblest child into a superior being by the proved methods culled from the author's practice. Illustrated with schedules and tables. $3.50 at all booksellers', or use coupon below to order direct from publisher.

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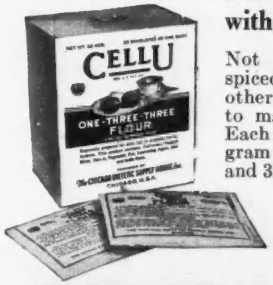
Not only plain muffins, but also spiced, pineapple, blueberry, and other tasty variants. A quick way to make the diet more appetizing. Each finished muffin contains only 1 gram carbohydrate, 3 grams protein, and 3 grams fat.



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News Notes

Detroit Meeting of the A. D. A. It is anticipated that demand for space in hotels will be heavy this year. Therefore, information follows concerning the rates at the Statler Hotel, convention headquarters, and at one other nearby hotel so that members may make reservations at an early date and at a specified rate. Statler Hotel rates are: for single room, $3.30 and up; double room, $5.50 and up; room with twin beds, $6.05 and up; suites, $9.35 and up. Rates at the Tuller Hotel are: single room, $2.00 and up; double room, $3.50 and up; room with twin beds, $5.00 and $5.50. Railroad rates, as given by the Pennsylvania Railroad under date of February 20 and the New York Central Railroad under date of February 23, appear in the table following:

Round Trip Railroad Fares*

To Detroit from	First Class Lower	First Class Upper	Coach
Atlanta, Ga.	$40.05		$24.65
Atlantic City	42.90	38.60	23.20
Baltimore	36.65	32.95	19.55
Birmingham, Ala.	44.95		27.00
Boston (direct)	46.60		25.75
Buffalo (direct)	15.40		11.20
Chicago (direct)	18.30	16.50	11.35
Cincinnati	16.30	14.70	10.05
Cleveland	10.60		6.90
Denver	69.60		52.35
Indianapolis	17.25		10.65
Jacksonville, Fla.	57.00		34.95
Kansas City	41.10		28.55
Minneapolis	38.50		27.50
New Orleans	58.15		35.40
New York	43.00	39.50	22.45
Newark	43.30	39.00	22.45
Omaha	43.00		31.10
Philadelphia	39.65	35.70	21.25
Pittsburgh	19.00	17.10	11.70
St. Louis	28.95		17.50
Washington, D. C.	37.30	32.95	19.95

* These rates do not include the federal tax. Fares shown for lower and upper births do not include the cost of space occupied.

New Ruling Concerning Notice of Change of Address by Members of the Association and Subscribers to the Journal. Members and subscribers to the JOURNAL are urged to send notice of change of address to the Chicago office by the 15th of the month prior to the mailing of each issue. Unless the Association is so notified, it cannot be responsible for the member or subscriber receiving all issues of the JOURNAL. Any member or subscriber failing to so notify the Business Office of the Association will be expected to pay the single copy price, fifty cents, for any issue missed.

It is necessary to stress this ruling because of the expense to the Association for extra postage and correspondence entailed in supplying back issues. In many instances the notice of failure to receive the JOURNAL does not reach the Business Office until several months have elapsed.

American College of Surgeons War Sessions. Included in the program of the first "One-Day Meeting" of these War Sessions held in various sections of the country, which began March 2, was a panel discussion devoted to the interests of hospital representatives regarding priorities, the maintaining of adequate professional and nonprofessional personnel, relation of the procurement and assignment service to the hospital, organization of the hospital for civilian defense, maintaining standards of service, and meeting the increasing costs of hospital service.

Nutrition for Defense Refresher Course, University of Wisconsin. Under the sponsorship of the State Nutrition Committee, a refresher course for professional people in the field was held at the Memorial Institute, University of Wisconsin, February 6–7. Among the speakers and subjects were the following: Dr. Carl N. Neupert, "Some Objectives in Public Health Nutrition"; Professor E. B. Hart, "Key Foods Which Provide Minerals in the Diet"; Dr. Margaret H. Irwin, "Establishing Good Food Habits in Childhood"; Mrs. Charlotte Buslaff, "Recent Investigations Should Direct Our Methods in Preserving Nutritional Values in Foods"; Dr. Helen S. Mitchell, "Successful Community Organization for Nutrition Defense" and "The Successful Management of the School Lunch"; Dr. Julian D. Boyd, "Nutrition as It Affects Tooth Decay"; Professor C. A. Elvehjem, "Diet, Health and Defense"; Florence Beatty, "Various Methods of Teaching Nutrition at Different Age Levels"; Mr. Bryant Kearl, "Home Economics Teachers and Graduates Can Advance Nutrition Through the Country Weekly"; Mrs. Aline W. Hazard, "The Use of Radio in Teaching Nutrition"; Professor W. B. Sarles, "Industrial Propagation of Yeast and Its Bearing on Human Nutrition"; Professor May L. Cowles, "The Effect of the High Cost of Living on Family Food Problems"; Dr. Helen T. Parsons, "The Nutritional Values of Some Wisconsin Products Not in Common Use"; Dr. Edna Hill, "The Dietary Importance of Whole Wheat and Its Use"; Dr. E. L. Sevringhaus, "Medical Aspects of Nutrition Problems"; Dr. H. A. Waisman, "Recent Research on the Vitamins."

National Nutrition Program Under Joint Sponsorship of Government and Food Industry. Final arrangements have been made to launch the drive in which the advertising of food manufacturers will be tied in with the government's

News about STAR CANNED MEATS...

and their part in

AMERICA'S VICTORY PROGRAM

This year the family of Star Canned Meats has become smaller...for many of its members have been "drafted" to play a part in America's Victory. Here are the reasons why:

THESE CANNED MEATS GO TO OUR ARMY, NAVY AND FIGHTING ALLIES

Treet... Spiced Pork... Corned Pork... Corned Beef... Pork Sausage... Corned Beef Hash... Chile Con Carne... Canned Bacon...Roast Beef...Dried Beef...Special Canned Field Ration...all these are going in large quantities to the fighting fronts, because they combine concentrated food value and keeping quality with light carrying weight.

THESE CANNED MEATS ARE "DISCONTINUED" FOR THE DURATION

Canned Hams ... Corned Beef Hash... Tamales...Chile Con Carne with Beans ...Spaghetti with Meat Balls...Meat Gravy ... Beef and Noodles... Cocktail Frankfurters...Canned Pork Sausage and some others will not be available to consumers after the present supply is exhausted, *to conserve tin for guns and tanks and planes...* and for canned goods for the armed forces.

THESE ARE STILL AVAILABLE FOR THRIFTY MEALS

Treet...Corned Beef...Vienna Sausage... Potted and Deviled Meats and Spreads ...Tongue...Veal and Ham Loaf...Chile Con Carne without Beans... Dried Beef in Glass... Luncheon Meat and Spiced Ham... these canned meats will still be available for home use, in reasonable quantities, from your regular dealer.

AND THESE BUYING GUIDES STILL APPLY

U. S. INSPECTED AND PASSED BY DEPARTMENT OF AGRICULTURE

Government Inspection of ingredients and processes. Pre-proving in our Experimental Kitchens and by our Consumer Testers.

Full information on the label. This includes every significant fact about the product, from number of servings to pre-tested cooking instructions.

Quality ingredients...selected for better results in the high-temperature cooking and canning processes used.

The Star Canned Meats you buy are all prepared under these important quality controls. Make them your guides to assured Canned Meat goodness.

ARMOUR'S 75th ANNIVERSARY

Marie Gifford
Director, Food Economics Department

ARMOUR AND COMPANY

SALADS
supply dietary factors important for good nutrition

NUTRITION EXPERTS URGE US TO EAT THESE FOODS EVERY DAY

Note that "salad makings" occur in several of the categories

MILK—at least a pint for everyone, more for children—or cheese, or evaporated or dried milk.

ORANGES, TOMATOES, GRAPEFRUIT, OR RAW CABBAGE—at least one of these.

VEGETABLES — GREEN, LEAFY, AND YELLOW—one big helping or more—some raw, some cooked.

POTATOES AND APPLES—and other vegetables and fruits.

LEAN MEAT, POULTRY, OR FISH—or sometimes dried beans or peas.

EGGS—at least 3 or 4 a week, cooked any way you choose or in "made" dishes.

BREAD AND CEREAL—whole grain products or enriched bread and flour.

FATS, SWEETS, and seasonings as you like them.

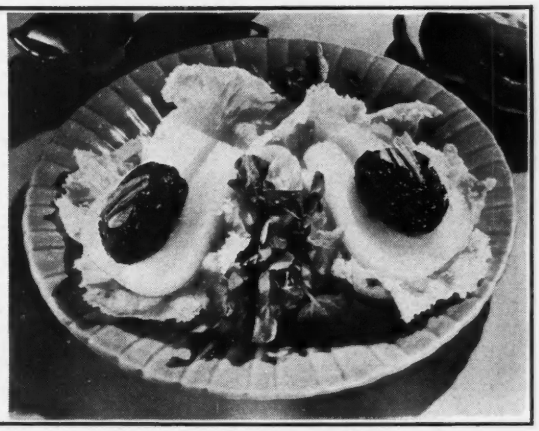
SALAD DRESSINGS

supply the "flavor lift" that gets those salads eaten!

● Consider that familiar list of the foods we should eat daily, in relation to the role that *salads* can play in good nutrition . . . how much they have to offer . . . what a help they can be in planning well-balanced meals that are also *varied*.

"Salad makings" are included in several groups of foods recommended to be eaten daily. Oranges, tomatoes, grapefruit, raw cabbage; green, leafy, and yellow vegetables; potatoes and apples, and other vegetables and fruits; these foods make important dietary contributions . . . and they all *taste good* in salads!

That phrase "taste good" is a reminder that the well-balanced meals so carefully planned must also have plenty of *taste appeal*. Providing the right foods is only half the job. They must taste so good that nothing will be left half-eaten.



To help maintain bodily stamina, nutritionists urge that a liberal part of the diet consist of "protective" foods. Salads—with their leafy greens, fruits, and vegetables — are important "protective" foods. This California Salad—which combines pear halves, prunes, and pecans with lettuce and watercress—tastes especially good with Miracle Whip Salad Dressing.

Especially is this true of salads. To a large degree the dressing helps make the salad . . . for no matter how crisp the greens, how flavorful the fruits or vegetables, the salad may not be eaten if the dressing isn't right.

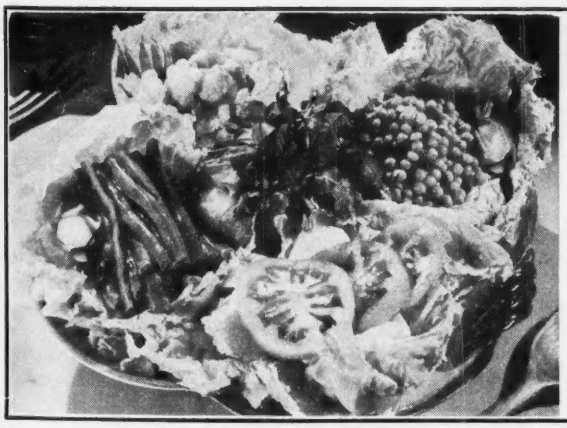
So, in the interests of good nutrition, it's wise to choose salad dressings that people really like.

With some people that means French Dressing; others want a cooked dressing, or mayonnaise, or Thousand Island. Most people, of course, will vary the dressing according to the salad.

To satisfy each of these tastes, Kraft provides a dressing of specific flavor-appeal: Miracle Whip Salad Dressing; Kraft Kitchen-Fresh Mayonnaise; Kraft French Dressing; Miracle French Dressing; Thousand Island, and others.

Each of them is made from quality ingredients, under strictest supervision . . . enjoys wide popularity.

EDUCATIONAL DEPARTMENT
KRAFT CHEESE COMPANY



Spring Medley Salad . . . cooked cauliflower, green beans and peas, with fresh tomatoes, radish roses, lettuce and watercress . . . offers a "medley" of nutritional factors as well as tempting flavors. Either of Kraft's two popular French Dressings would be perfect with this salad.

nutrition campaign, according to the New York *Times* for March 1. Millions of dollars have been voluntarily subscribed by industry for this purpose, matched by the government's appropriation of another million or so. Thousands of posters and pamphlets have been prepared for distribution in banks, postoffices, hotels, restaurants, department and grocery stores and other public places. Utility companies, it is understood, are also planning a related campaign. The government seal to be used in the promotional material as a symbol of the national nutrition program is expected to become as widely known as the NRA blue eagle. Keystone of the whole program is a set of specially formulated regulations to be known as the "Official Nutritional Food Rules." A list of certain essential foods has been compiled and the manufacturers of these may include the rules in their advertising. Harry Houghton, merchandising consultant to the office of Paul V. McNutt, and John Murphy, public relations director of the Associated Grocery Manufacturers of America, have been principally responsible for working out details, according to the *Times*.

New Textbook on Food and Nutrition, A.R.C. This newly revised fifth edition of *Food and Nutrition* was prepared by Martha Gibbon, based on material provided by the nutrition staff of the American Red Cross under the direction of Melva Bakkie. The textbook is designed for use with the 20-hour course of study for training nutrition aides. It is divided into four chapters and appendix, and includes references and suggested material for teachers. The titles of the chapters are as follows: Food Essentials for Health, Charts on Food Needs and Food Values, A Practical Plan for Meeting Daily Food Needs, and Making the Food Dollars Count for Health.

School Lunch Guide. A second, revised edition of this mimeographed guide prepared by the Virginia Dietetic Association is now on sale for 40 cents a copy. Copies may be ordered from Sally Ann Kurka, Virginia Department of Health, Richmond.

Economy Hints for the Purchasing of Food. The Cleveland Health Council, 1001 Huron Road, Cleveland, has prepared two mimeographed sheets detailing 24 suggestions which will be helpful to the housewife when purchasing food. The sheets are available at $1 per hundred or $8.50 per thousand.

The Hermann M. Biggs Memorial Lecture is being delivered in Hosack Hall, New York Academy of Medicine, April 2, by Dr. James S. McLester. The subject of the lecture, which is open to the general public, will be "Nutrition and the Nation at War."

New York Diabetes Association, Inc. A clinical meeting of this association under the auspices of the Committee on Surgery was held on March 26 at the New York Academy of Medicine. Papers on the general subject of "Reduction in Mortality Due to Gangrene in the Diabetic" were read by Drs. Frederick W. Williams, Samuel Standard, Lyman W. Crossman, and Beverly C. Smith. A panel discussion conducted by the speakers followed the program.

Teaching Practical Nutrition for Wartime Living. A booklet with this title and described as "designed especially to increase the health and vigor of British Columbia families by the application in every household of sound knowledge of nutrition," has been prepared under the direction of the Vancouver Council of Social Agencies, 1675 West 10th Avenue, Vancouver, B. C. The booklet was designed for use in classes in nutrition and household economy sponsored by the Greater Vancouver Health League and the Family Section of the Co-ordinating Council for War Work and Civilian Services. Ethel Pipes, director of the Department of Dietetics, Vancouver General Hospital, who supervised the preparation, was assisted by the following: Elinor Muirhead, nutritionist, City Social Service Department; Mrs. W. Lantz, assistant director, Department of Dietetics, and Jean Wyness, dietitian, General Hospital; Myrtle Moar, dietitian, Family Welfare Bureau; Charlotte Black and Norah Vicars, home economists, Vancouver School Board.

Chapters 1 to 4 contain information on how to make a budget work, how to divide the food dollar, marketing hints, fuel saving hints, suggestions for planning meals, when foods are in season, index to weekly menu pattern, individual menu patterns, a menu for every week of the year, and how to obtain variety in menus. Chapter 5 gives fifty recipes for preparing low-cost foods, and the appendix includes a list of cooking terms, quantities of foods in terms of servings per pound, food substitutions, references, and some miscellaneous suggestions for household economies.

The Case for Enriched Flour and Bread. This is the title of a mimeographed statement on the subject prepared by Dr. Russell M. Wilder, then chairman, Committee on Food and Nutrition, National Research Council, for the milling and baking industries. Starting with the statement that the real issue is not between the nutritional merits of enriched versus whole wheat flour and bread, but that the problem is created by the seemingly irrevocable fact that consumption of whole wheat flour averages less than 2.5 per cent of all flour used and that "the heroic efforts of more than a hundred years to encourage use of whole grain bread have been without avail," the pamphlet continues with the reasons for the Committee's earlier attention to this problem, results of various studies to determine the need for enrichment of processed flour as shown by thiamin and nicotinic acid deficiencies in human beings, and finally, recommendations of the Committee for the enrichment of both flour and bread and the laws governing regulation and control of the processing and labeling of these products.

Britain Facing New Reduction in Food Rations. Shipping losses of food may force Lord Woolton, Minister of Food, to order further reductions in the rationing of meat, white bread, tea and butter in England, according to the New York *Herald Tribune* for March 1. The use of wheat meal bread, in place of the white bread now on the daily menu, would save the importation of about 700,000 tons of wheat a year. Butter, now rationed at two ounces per person per week, may be cut by half to save the fats and margarine oil for cooking or other war uses. This further rationing may also result in setting price limits on meals in restaurants and hotels where heretofore anyone with sufficient funds could obtain a meal without coupons. A cut from the present two ounces of tea per person per week is expected in order to conserve shipping space. Britain's bill for tea for 1941 was larger than it had ever been in peacetime, due to the fact that consumption has risen with the increased tension of war.

Conservation of Scholarly Journals. The Committee on Aid to Libraries in War Areas requests assistance in its attempt to conserve sets of American scholarly, scientific, and technical periodicals, in order to complete foreign institutional sets after the war. Fearing the possible reduction in the already limited supply of these journals through collections of old periodicals for pulp, the committee hopes to enlist the cooperation of readers of this JOURNAL in preserving copies for future use. Questions concerning the project may be directed to Wayne M. Hartwell, Executive

BETTER BAKING AND ROASTING IN BLODGETT OVENS MEAN BETTER HEALTH

Health during this national emergency is as important as planes and ships. Food is plentiful in America, but unless it is scientifically cooked, it loses much of its value. The New Blodgett Baking and Roasting Ovens are the choice of Hotels, Restaurants, hospital and industries everywhere. Precision built and streamlined for efficiency and appearance, Blodgett Baking and Roasting Ovens deserve their leadership of this field, as they have for 93 years!

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SUNFILLED pure concentrated ORANGE and GRAPEFRUIT JUICES

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- **In ready-to-serve form, the indigestible peel oil fraction has been reduced by scientific methods to but .001%.**
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The extent to which disruption of oil cells occurs determines the range of peel oil content obtained by various methods of juice extraction commonly employed.	
1. Hand squeezed using conventional glass household squeezer	.001 to .02%
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Recommend SUNFILLED Citrus Fruit Juices for your hospitalized patients. Saves time, labor and money as well.

Complimentary trial quantities to institutions on request.

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CITRUS CONCENTRATES, INC.
DUNEDIN, FLORIDA

Assistant to the Committee on Aid to Libraries in War Areas, Rush Rhees Library, University of Rochester, Rochester, New York.

Conservation of Vitamin A. An order of the War Production Board prohibits, beginning February 10, the manufacture of multi-vitamin tablets, capsules, pills, or liquids, containing more than 5000 units of vitamin A in the largest daily dose recommended by the label or accompanying instructions. The same limitation order also covers use of vitamin A in feeds. For the purposes of the order, "vitamin A" includes its "pro-vitamins" such as carotenes and cryptoxanthin derived from plant, animal, fish or marine animal sources; "fish liver oils" refers to oils containing vitamin A, derived, extracted or processed from livers of the cod, shark, halibut, or other fish. The reason for the order is stated as follows: "National defense requirements for vitamin A have created a shortage thereof for defense for private account and for export, and it is necessary in the public interest and to promote the defense of the United States, to conserve the supply and direct the distribution thereof."

The Need for More Fats and Oils. According to a recent bulletin released by the U. S. Department of Agriculture, and prepared under the Food For Freedom Program, we imported 1.6 billion pounds of the 10 billion pounds of fats and oils used in 1940–41, including the oil contained in oilseeds, and more than half of these products originated in the Pacific area. The principal items imported from this area were cocoanut oil and copra, mostly from the Philippines, and palm oil from the Netherlands Indies and Malaya. Imports of perilla and of tung oils also originated in the Pacific; Japan controls the supplies of the former while the latter is a Chinese product. Alternative sources of supply for cocoanut oil and copra were the Netherlands East Indies, and various South Pacific Islands, as well as East Africa whence we may still derive some. In the past we have also obtained considerable quantities of palm oil from West Africa. Substitutes for cocoanut oil are available in the form of babassu and other palm-kernel oils contained in the nuts of certain varieties of palm trees found in great profusion in tropical Latin America. But transport, labor, and equipment shortages preclude any rapid expansion of imports of palm-nut kernels to the United States. Fairly large quantities of palm-kernels are available in West Africa. Brazilian oiticica oil and dehydrated castor oil, derived largely from Brazilian castor beans, are already being used to supplement supplies of tung oil and perilla oil in the United States.

As stated in the bulletin, it is important that the 1942 production goals for oil and fat crops be achieved if not surpassed. It is probable also that our remaining supplies of palm and cocoanut oil will be used in industrial rather than in edible products wherein they would be replaced by soy bean and peanut oils. Linseed oil can also be used as a drying oil in part replacement for perilla and tung oils. Peanut and soy bean oils can be used to replace cocoanut and palm oils in soap making, but with some difficulty; in edible products such replacement is possible without technical difficulties beyond the increased need for hydrogenation or hardening of the oils. The accomplishment of the goals for 1942 would mean about 700 million pounds of peanut oil, 1100 million pounds of soy bean oil, and 600 million pounds of linseed oil from domestic flaxseed.

Home Economies. The *Consumers' Guide* for January 15 was devoted to suggestions to the householder for stretching the life and usefulness of household goods and thus aid in the national defense program. The suggestions are detailed and very easy to understand, and cover care of heating equipment, cooking appliances, electric wiring, household fabrics, ironing boards and irons, plumbing equipment, pots and pans, ranges, refrigerators, rugs, sewing machines, vacuum cleaners, and washing machines. Some interesting and typical examples are the following:

When the spigot at the fire lining of your furnace boiler runs muddy water, flush the boiler. If sediment is allowed to collect on a level with the fire line of your furnace the boiler will overheat and rust.

Never set an oil burner too low or too high. Setting it too high makes soot and smoke and indicates incomplete combustion. Setting it too low will result in failure of the combustion parts to heat properly and they, in turn, will cool the flame so that all the oil won't burn. A fire set too low is smelly and dirty in addition to being wasteful. The fire in an oil range or heater with perforated metal cylinder burners (sleeve-type burners) should be blue with no white or red showing. Fire like this makes the metal cylinders cherry-red. When turned very much higher the fire will burn with an irregular, smoky, yellow flame. Using two burners at moderate fire is more economical than burning one at very high fire.

The motor of an electric refrigerator should do its job operating about one-third of the time, under average temperature conditions. In very hot weather it may operate more. If it runs more than this, have it checked by a service-man. It may need only minor repairs.

Don't scrub the bottoms of your pans until they shine. A dull surface will absorb more heat than a bright shiny one.

In areas where defense power needs are great and electric generating capacity is limited, do as much cooking as you can during non-peak-load hours. Peak loads are around 5 to 6 o'clock in the evening, when lights go on in homes, offices, and factories, dinner preparations begin, and people homeward bound begin to pack into transportation systems.

Most light bulbs have a life of from 1000 to 3000 hours. For economy and long life use good quality bulbs of the right size for your needs. A 100-watt bulb gives more light, costs less to buy, and less to operate, than two 60-watt bulbs. Buy lamps with correct voltage rating. Your power company will check the voltage for you.

Before you try to wash "washable" wall-papers, test a small inconspicuous spot to see that the colors will not run. If they don't, use a sponge squeezed out of clear lukewarm water on a thin wall-paper. On a heavy paper a suds of mild pure soap may be used. Rub lightly and use as little water as possible to avoid soaking the paper from the wall. Wash from floor upward.

Never detach the cord from your electric iron while the current is on. Instead pull the plug from the appliance outlet first, to avoid pitting the terminal connections in the iron and in the iron plug. Pitting results in poor contact in the iron plug and eventually makes replacement of the connector necessary.

To remove chewing gum spots, rub with ice. Then scrape hardened gum out of the fabric. Or treat with carbon tetrachloride.

Cut off your cellar stairs with a fire-resistant door to lessen the danger of fire spreading to the rest of the house. Firestops of incombustible material supported on metal strips placed between the studs in the cellar will prevent many a cellar fire from spreading to the rest of the house.

Stop small leaks in water pipes and tanks temporarily by putting a piece of leather or rubber over the leak, hammering a piece of sheet metal to fit over it and securing both by a clamp which fastens around it. The pipe clamps can be bought at a hardware or 10-cent store, or the patch can be held in place by wrapping tightly with wire.

The last pages of the publication contain lists of bulletins where more complete directions may be found, as well as

SOMETHING YOU CAN DEPEND ON!
WISCONSIN ALUMNI RESEARCH FOUNDATION
Approved for VITAMIN D upon periodic tests
D
IRRADIATED EVAPORATED MILK
D
IRRADIATED Evaporated MILK
. . . a reliable source of VITAMIN D

WHEN you consult your charts for the vitamins in ordinary milks and foods, the one essential food factor which is consistently and inevitably lacking or inadequately supplied is Vitamin D.

When you review the statistics on clear and cloudy days, as conveniently given on the new chart offered below, you are confronted with the record of undependability and scarcity of sunlight as a source of the essential calcium mobilizing factor.

When both are viewed in the light of unscientific food selection, modern living habits and conditions, the true significance of widespread lack of Vitamin D becomes disturbingly apparent.

Here then is a basic reason for Irradiated Evaporated Milk—with Vitamin D potency greatly increased by the Steenbock Irradiation Process.

Numerous clinical studies have consistently shown the antirachitic value of the product. Its extensive use aids greatly in eliminating Vitamin D deficiencies on a communal scale.

No change in the regular antirachitic program is required. Rather, in Irradiated Evaporated Milk the physician finds a most dependable "co-worker." Lack of co-operation from the mother does not deprive the child of Vitamin D. Regularly as mealtime the child gets all this milk's normal nourishment, plus Vitamin D.

Let us send you "Rachitic Studies" by May and Wygant. It reports three years of clinical research on 616 infants. And ask for the charts on Vitamins and Nutrition, and Sunshine Data for 67 cities. Mail the coupon, your prescription form, or letter head today.

WISCONSIN ALUMNI RESEARCH FOUNDATION
Approved for VITAMIN D upon periodic tests

Every licensed brand of Irradiated Evaporated Milk is entitled to display this Seal. All Vitamin D products licensed by the Foundation are periodically tested whether the Seal appears thereon or not.

WISCONSIN ALUMNI RESEARCH FOUNDATION MADISON WISCONSIN

Please send me *Rachitic Studies, Sunshine Facts,* and the *Vitamin and Nutrition Poster.* JADA-442

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Address.....

City.....*State*.....

suggestions for neighborly sharing of such appliances as washing machines, vacuum cleaners, irons, garden tools, and sickroom equipment.

New Standards for Cooking Utensils. According to *Institutions*, a new standard for multiple-coated, porcelain enameled-on-steel utensils was discussed by members of the National Bureau of Standards, U. S. Department of Commerce, and manufacturers, dealers and users of these products at a meeting in Chicago in January. Among the general requirements set forth in the proposed standard are: that the metal base shall be of good grade steel or iron; that surfaces shall be smooth, uniform in color and free of fracture; that the gross solubility of the enamel shall not exceed 0.025 gm. per square inch of wetted surface area when tested as specified in the standard; and that the ware shall meet certain requirements for resistance to thermal shock and impact when tested.

Nutrition to be Given "Fashion Appeal." According to the New York *Times* for February 22, the aim of the Nutrition Committee of the New York Advertising Women's Club is "rescuing vitamins from the baffling realms of technical nutrition charts and wrapping them in simple truisms readily adopted in the hectic day of a working girl." Like the beauty ads in the magazines and papers, the key to success in love as well as in business will be offered to the working girl through the simple expedient of consuming each day the foods recommended as minimum requirements by the Committee on Food and Nutrition of the National Research Council. Brief, catchy phrases have been coined to make the program more inviting, such as 'The Forgotten Breakfast," "The Lopsided Lunch," "Grow Plump or Thinner on a Balanced Dinner," "Vitamin Z for Zest," and "Eat Up, Build Up, Brighten Up." The commercial world of foods and fashion will cooperate in this advertising campaign, and restaurants will be persuaded to create better food combinations and to serve more fresh fruits and vegetables on cafeteria counters. Obviously the end result hoped for in all these efforts is to make the white collar girl feel that to neglect her vitamins would be almost as disastrous as to omit the purchase of a new spring hat.

U. S. Grade Labels on Canned Fruits and Vegetables. A recent circular released by the Extension Service, U. S. Department of Agriculture, gives in story form descriptions of the qualifications of the three grades of canned fruits and vegetables. Labels are pictured clearly and methods of grading explained. Also, uses for the different grades are suggested, *i.e.* Grade A for salads or dishes when appearance counts, Grade B for general use, Grade C for puddings, soups, croquettes, and other similar dishes. Attention is called to additional descriptive information on labels, such as the number of pieces in a can of apricots, the sieve size of peas, the strength of syrups in canned fruits, the net weight, and, in the absence of a label giving definite grade, the statement, "Packed under the Continuous Inspection of the Agricultural Marketing Service of the U. S. Department of Agriculture."

Tin Cans and Tenderizers. According to a release of the War Production Board, Division of Industry Operations, for February 23, deliveries of tin cans for home or institutional canning purposes are not barred by provisions of General Preference Order M-81. Manufacturers are permitted to sell home-canning type cans to hardware stores and other distributors buying for re-sale to home or institutional canners. Restrictions in the order on purchases by commercial canners are inapplicable to home canners. An increase in home canning this year is desirable in order to lift some of the pressure on commercial canners, the release adds. The Department of Agriculture hopes to raise home canning to a level about 100 per cent above 1941. The number of cans required for home and institutional purposes this season is not likely to exceed 50,000,000. Manufacture of this amount will require about 100 tons of tin, it was estimated.

Under a later date, March 2, the WPB said that the same machines that make steak "tenderizers" for restaurants and hospitals are now turning out "bits and pieces" for war. One firm, for instance, is making products ranging from crank cases for motorcycles and heavy steel spouts used in moulding field guns, to parts for a manufacturer of screw machines. The same engine lathe used to machine shafts and castings for steak machines is now working on the spouts needed in moulding field guns. Steak machines made by this firm are now used in post exchanges at some Army flying fields and in thousands of restaurants, hospitals and institutions. Recently, a wire from Reykjavik, Iceland, called for FOB prices on a rush order, presumably to make steaks more "chewable" for American soldiers and sailors stationed there.

Victory Gardens is the subject of the March 1 issue of the *Consumers' Guide* which tells first what to grow in a small garden and then gives specific directions as to fertilizer, tools, insect control, etc. necessary to successful gardening. A planting calendar and planting yardstick are included, as well as a list of "don'ts" for gardeners, with comic illustrations: "Don't start what you can't finish. Don't waste good seed on bad soil. Don't run rows up and down a hill. Don't let the pole beans black out the beets. Don't let anything go to waste." These are a few of the precautions urged, as well as more positive statements about raising fruits and vegetables for canning, drying, and preserving. Securing an expert's advice is one of the soundest suggestions offered to those planning a community victory garden program. "In the city, he may be the vocational agricultural instructor in the school system, a horticultural expert from the city park system or the Botanical gardens. He may be a botanist at the local university, or a local experienced successful gardener. In rural communities, your garden supervisor might be a farm or garden supervisor from the Farm Security Administration, someone from the Soil Conservation Service, or the vocational agricultural instructor in the school. The County Agent or Home Demonstration Agent can help much in organizing and planning and in bringing help on local needs."

Jobs for Women Studied. Job opportunities in a wartime world for women who have enjoyed training in specific types of work was the theme of a conference at the Hotel Mayflower, Washington, March 20–21, under the auspices of the Institute for Women's Professional Relations, according to the New York *Times* for March 8. Representative Edith Nourse Rogers presided at the opening session. Among the speakers were Frances Perkins, Secretary of Labor; Dr. Warren F. Draper, assistant to the Surgeon General; Judge Robert P. Patterson, Under-Secretary of War; Helen W. Atwater, former editor of the *Journal of Home Economics;* Dr. Helen S. Mitchell, principal nutritionist, Office of Defense Health and Welfare Services; Jane Hoey, Social Security Board; and Marie Sellers, General Foods. Dr. Sara M. Jordan, chairman of the Women's Committee on Defense Assignment and Procurement of the American Medical Association, reviewed the situation as regards professional opportunities for women in the world of medicine.

Florida Nutrition Week. In a proclamation designating the week of March 6–13 as Florida Nutrition Week, a copy

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WHEN infection clears, the high-caloric diet repletes vitality. Foods and fluids may be reinforced with KARO, 60 calories per tablespoon, not readily fermentable, rapidly absorbed and effectively utilized.

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"Infant Feeding Manual For Physicians" is a concise, helpful monograph containing specific information and tested Karo feeding formulas. Sent postpaid.

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Safeguard Your Patients

by ordering V-C-B today to assure adequate administration of Vitamin C in any emergency

The heavy wartime demands of our Government and shipments to the Allies have curtailed the available supply of pure crystalline Vitamin C to a point where we are having difficulty keeping up with orders for Vitamin C Beverage Base V-C-B. At any moment we may be forced to turn down orders.

Naturally, we are trying to take care of our regular customers, and urgently recommend that orders be placed now anticipating future needs. In estimating quantities, bear in mind that it may soon be impossible to rely on obtaining fresh fruits for essential Vitamin C in daily diets. V-C-B, hermetically sealed, oxygen-free, keeps indefinitely; requires little storage space.

V-C-B is a water soluble powder, which, when dissolved as directed, produces a pleasant fruity beverage approximating the caloric value and Vitamin C potency of fresh orange juice. The standard cost is only 54¢ a gallon, of which a 4-oz. liquid portion provides individual daily requirements (1000 International Units) of Vitamin C and 50 calories. Valuable also for fortifying fruit juices and beverages with Vitamin C.

V-C-B is economical: one standard No. 3 can contains approximately the same Vitamin C as 1/2 crate of oranges, and requires only 1/32 the amount of storage space. V-C-B is always fresh; there is no spoilage or waste; and it eliminates the time-wasting job of squeezing large quantities of oranges.

V-C-B and all advertising claims for it are accepted by the Council on Foods of the American Medical Association. Because of its recognized advantages, the Byrd Expedition took no other source of Vitamin C to Antarctica. For the same reasons many State Institutions have adopted V-C-B as a standard for administering Vitamin C.

Many of these institutions are saving hundreds of dollars yearly with V-C-B. Similar savings can be brought about in your institution through use of V-C-B. If you have not tried V-C-B, send for free sample and complete information TODAY.

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HILKER AND BLETSCH COMPANY
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Please send, free of charge, 3½-ounce sample of V-C-B (makes 1 quart of Vitamin C Beverage).

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of which was sent in by Anna Tracy, Governor Spessard L. Holland stated, in part, "I do hereby designate the State Defense Council, through its chairman of Home and Community Services, Anne Carson Dunaway, and her Advisory Nutrition Committee, as responsible for coordination of activities, and as a medium for advice and assistance to district groups that the greatest benefit may accrue to our people.

"I further recommend that leaders in nutrition, medicine, public health, education, home economics, social work, civic work, and representatives of agriculture, labor, industry, consumers and government within the State, give of their time and experience during the week to the dissemination of proper nutrition information; and that churches, schools, lodges, civic clubs, chambers of commerce and social agencies devote a part, or all, of their programs during the week to the subject; and that newspapers and magazines and radio stations within the state lend their aid in properly publicizing and promoting the event, in order that all Floridians may be benefited and enlightened as to the values of nutrition, and, as a result, better prepare themselves for any eventuality in the national emergency."

News from the Harvard Field Hospital Unit, England. Under date of December 29, Charlotte Raymond writes: "The hospital has made progress since my last letter written early in November. As soon as Dr. Gordon returns from America, our staff will be complete. Our last doctor arrived early in December and the house mother landed in England Christmas night. All buildings are now completed and will soon be entirely equipped. We have five of our nine hospital huts in operation, and the whole place has lost its atmosphere of construction. . . . Late in November I went to London for one day, as I had to go to the American Embassy on passport business. I happened to choose a very important day and so was present at an exciting occasion. The Vice Consul presented to the British Dietetic Association a mobile canteen from the American Dietetic Association. I was the only member of A.D.A. at the service. The ceremony took place in the courtyard of the London County Council with several British dietitians in attendance—Margery Abrahams, Rose Simmons, Peggy Broatch, Elspeth Marshall being the best known to my professional sisters at home. During the same day I heard Lord Horder, the King's physician, speak on "The People's Health in Wartime." Lord Horder is the man to whom all credit goes for the improvement of the horrible conditions in London air raid shelters early in the war. His name is a by-word here. . . . May 1942 bring us all peace—and may it be a full, happy year for each one of you."

Katharine McFarland Ansley, 1940–41 chairman of the Administration Section, American Dietetic Association, has announced her marriage to Mr. W. H. Alderman. She will reside at 1380 Raymond Avenue, St. Paul, Minnesota.

Ruth L. White Co-author of Two Important Papers on Nutrition of Children and Dental Caries. The *Journal of the American Dental Association* for January 1942 carries an article on "The Influence of Nutrition Supervision on Dental Caries," by Dr. Percy R. Howe, Miss White and Dr. Mark D. Elliott. The *Journal of Nutrition* for February 1942 includes an article on "The Ascorbic Acid Requirements of Children," by Dr. Otto A. Bessey and Miss White.

New Publication for Nurses. *Ene* is the title of this new journal published under the auspices of the National School for Nurses, Caracas, Venezuela. The publication carries original articles, abstracts from the literature, news and notices of events of interest to nurses.

Agnes P. Teske Appointed to Staff of Vassar Brothers Hospital. Miss Teske, formerly of Patterson, New York, has been appointed assistant dietitian in charge of private patients' pavilion and therapeutic diets at Vassar Brothers Hospital, Poughkeepsie, New York. She is a graduate of Michigan State College and Columbia-Presbyterian Medical Center student dietitian training course, and was formerly at Harkness Pavilion of the last-mentioned institution and later therapeutic dietitian at St. Peter's General Hospital, New Brunswick, New Jersey. Miss Teske succeeds Frieda Reuman, who resigned to study at Teachers College, Columbia University.

Doris N. Williams, formerly assistant dietitian at Methodist Hospital, Fort Worth, is now at St. Elizabeth's Hospital, Baker, Oregon.

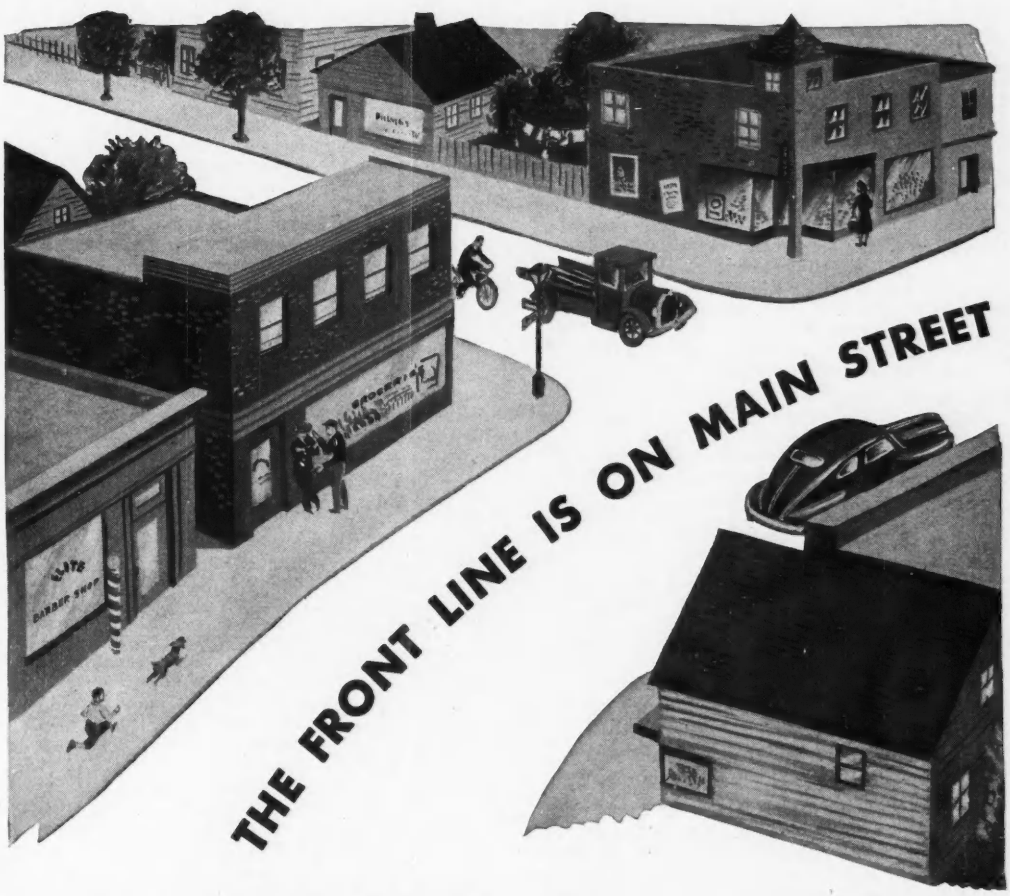
Detroit Dietetic Association. Gladys E. Hall, educational director, American Dietetic Association, was the speaker at the November meeting.

The following appointments have been announced: Mrs. Jean Keuntzel Tavener and Mrs. Edith Gulbe Coy, to Department of Health, Detroit; Mrs. Helen Benson Banach, to St. Mary's Hospital; Gladys Enke, St. Mary's Hospital, to Infant Welfare Society, Chicago; Mrs. Dorothy Stoddard Ward, Mayberry Sanatorium and Mrs. Harriet Slayton Hiller, Seattle, Washington, to Receiving Hospital, Detroit; Mrs. Leah Wisenfeld, to Herman Kiefer Hospital; Mrs. Esther Ford, to cafeteria of Herman Kiefer Hospital; Ruth Gott, to Youngstown Hospital, Ohio; Annette La Berge, to St. Elizabeth's Hospital, Granite City, Illinois; Margaret Graner and Joehana Smith, to Henry Ford Hospital; Mary Dunlop, to Presbyterian Hospital, New York; Vera Stribe, to St. Joseph's Hospital, Keokuk, Iowa; Lois Holmes, to Ear, Nose and Throat Infirmary, Chicago; Sally Jeneks, to Sparrow Hospital, Lansing; Edna Schultz and Marion Kelly, to Harper Hospital. Mrs. Jean Dunnigan has been granted a leave of absence from the Lunchroom Department of the Detroit Public Schools.

The following have announced their marriages in recent months: Barbara Hall, Herman Kiefer Hospital, to Mr. Milton Wile; Frances Ball, Children's Hospital, to Mr. John Hesse; Opal Kreig, Detroit School Lunchroom Department, to Mr. Michael Orlovich; Annie Lou Sullivan, Henry Ford Hospital, to Mr. Ralph Weitz.

Mr. and Mrs. Judd (Sarah Kellogg) and Mr. and Mrs. Zimmerman have announced the birth of sons.

Florida Dietetic Association held its eighth annual meeting in Gainsville, March 9, in conjunction with the Second Congressional District Nutrition Conference. The Conference was one of five held in the state during Nutrition Week, under the auspices of the Advisory Committee on Nutrition, State Defense Council. Highlights of the program were the addresses of Dr. W. H. Sebrell, assistant director of nutrition, Office of Defense Health and Welfare Services, Washington, and Dr. Lydia J. Roberts, professor of nutrition, University of Chicago. Dr. Sebrell spoke on "The National Nutrition Situation with Particular Reference to the Southeast"; Dr. Roberts, on "Organization of the Community for Improvement in Nutrition." Officers elected were: president, Edith Manfold, assistant dietitian, Florida State College for Women; vice-president, Helen Cate, instructor in foods and nutrition, Florida State College for Women; and Eunice Grady, county home demonstration agent, Miami, re-elected secretary-treasurer. The association went on record as giving its active support to the work of the State Advisory Committee on Nutrition, and to the Florida State-Wide Public Health Committee. The association was pleased to have as its guests four of the seven dietitians stationed at Camp Blanding.



All-out efforts for a successful conclusion of hostilities demand the hands, brains and hearts of every American. Maintenance of maximum efficiency requires a healthy, well-nourished body. Our men in the armed forces are assured of nutritionally balanced meals, but, the folks at home also need proper nourishment so that they can do their jobs . . . so important to the men in the field.

COCOMALT, daily, is an excellent "defense" addition to meals. More and more, physicians are recommending this delicious drink for the entire family. This enriched food drink contains vitamins A, B_1 and D as well as the minerals, calcium, phosphorus and iron.

A New Clinical Study has again shown the value of COCOMALT in therapeutic diets. Have you sent for your copy of "The Use of a Malted Food Preparation as a Dietary Supplement in Pulmonary Tuberculosis"?

Cocomalt *Enriched Food Drink*

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Members of the association serving on the Advisory Committee on Nutrition, State Defense Council, are Dr. Margaret Sandels, chairman of the committee, and Helen Cate, Boletha Frojen, Mary E. Keown, Dr. Amalia Lautz, Anna Mae Sikes, Dr. Jennie Tilt, and Anna M. Tracy.

Kentucky Dietetic Association. Ninety-five members and friends attended the dinner of the association held at the Phoenix Hotel, Lexington, January 28. Florence Imlay, president, presided, and Alberta E. Limback, University of Kentucky, reported on the work of the Blue Grass section. Mr. G. B. Leach, Mayor of Lexington, talked briefly on the economic phase of our present emergency. The guest speakers were Mary I. Barber who spoke on "Army Food," and Dr. Helen S. Mitchell who discussed "Nutrition in Relation to Civilian Defense."

The spring convention was held in Louisville March 20–21. Mrs. Iva Alexander, chief dietitian, City Hospital, Louisville, was general chairman; Mary King Burrier, Eastern State Teachers College, Richmond, head of the program committee; and Mary I. Wells, chief dietitian, Methodist Episcopal Deaconess Hospital, Louisville, chairman of educational exhibits.

The marriage of Mary Opatich, treasurer of the association, to Lieutenant Edward H. Talfair, Fort Knox, has been announced.

Missouri Dietetic Association. According to the *Bulletin* of the association, a refresher course consisting of two lecture periods was sponsored by the Kansas City Dietetic Association and conducted by Flora Carl, University of Missouri Extension Service, in December and January. Another refresher seminar conducted by Dr. J. Ernestine Becker, Johns Hopkins Hospital, was sponsored by the Kansas City Gas Company. The work of the dietitians and home economists in Kansas City has been closely correlated with the national nutrition program. Representatives of the Dairy Council and Kansas City Gas Company have visited grade and high school home economics classes, distributing literature and giving health talks and demonstrations. A series of lectures has been outlined for homemaker groups. The topics for discussion include: Stump the Experts, or Information Please; Demonstrations on Food Preparation; Nutrition Clinics; Intelligent Food Buying; Low-Cost Meals; Stretching the Food Dollar; How the Army, Navy, and Air Corps are Fed; and Apartment Marketing and Cookery. Volunteer speakers are assigned certain topics and are called upon to lead discussion groups interested in the assigned topics. A speaker from the nutrition committee was present at eleven grocers' meetings at which the grocer's part in the nutrition program was explained.

The Kansas City Gas Company issues weekly a leaflet entitled "Keep Your Family Strong," circulation of which has increased from 2000 to 5000 since September. A local news letter distributed by the dietetic association to all nutrition volunteers each month carries items concerning outstanding nutrition speakers appearing in Kansas City, new material that is available, nutrition radio programs and progress being made by the various nutrition for defense units such as the Hewibs, the home economics teachers, dietitians, Red Cross workers and government agencies.

Two members of the dietetic association have been authors of magazine articles in recent months. Jeanette Hindman (Prudence Pevely) was a feature writer in the December issue of *American Home* under the title, "The Kitchen's Drafted Too." The January issue of *Progressive Physical Educator*, published by the national physical education fraternity for women, carries an article on "Nutrition and National Defense" by Marie C. Harrington, editor of the *Bulletin*.

Mary Reeves, formerly associated with the Red Cross in St. Joseph, has joined the staff of the Missouri State Board of Health as nutritionist in the division of child hygiene. Miss Reeves brings to her job recent experience in studying public health problems in the nutrition workshop under Dr. Lydia Roberts, University of Chicago.

Members of the St. Louis Dietetic Association held their regular monthly meeting jointly with the annual educational meeting of the Dairy Council of St. Louis, February 2. Dr. Philip C. Jeans, professor of pediatrics, University of Iowa Medical School, discussed the topic, "The Absorption of Minerals and Vitamin D."

The four dietitians at Stephens College are teaching Red Cross courses in nutrition to faculty and students this semester.

Recent appointments include: Ethel Linehardt, trained at Oklahoma University Hospital, to St. Mary's Hospital as therapeutic dietitian; Mrs. Arlene Collins, Kansas University Hospital, to Kansas City Tuberculosis Hospital, replacing Mrs. Theresa Lisle; Bess Woodrum, Menorah Hospital, to General Hospital, Knoxville, Tennessee; Gladys Jordan, home economics extension representative in Pennsylvania, to Jefferson Barracks as staff dietitian; Della Tomlinson to the Veterans' Hospital at Jefferson Barracks, replacing Alta Stone; Anne Katherine Disch, City Sanatorium, St. Louis, to Fitzsimmons General Hospital, Denver, to be replaced by Dorothy Heaney, graduate of the University of Missouri and trained at Johns Hopkins Hospital.

A son, Brockman Cambell Self, was born to Mr. and Mrs. Kenneth Self (Marjorie Euwer) January 9.

New Jersey Dietetic Association. At an executive meeting of the association in Newark, February 6, plans for the spring meeting were discussed.

Harriet Stone spoke over WAAT, Jersey City, February 9.

Recent appointments include: Sara Campbell, Essex Mountain Sanatorium, Verona, to Essex County Isolation Hospital, Belleville; Lucille Cover, Post-Graduate Hospital, New York, to Johns Hopkins Hospital; Joy Emanual and Ruth Taylor, graduates of the New Jersey Cooperative Student Training Course to Post-Graduate Hospital and Hackensack Hospital, respectively.

Announcement has been received of the marriage of Annette Zelzer to Dr. David Glick, January 10, at Newark, and of the engagement of Margaret Watson to Corporal John Stacken, Fort Jackson.

Greater New York Dietetic Association. A special nutrition program was planned by Lenna F. Cooper, national A.D.A. chairman of the Defense Committee, at Cornell Medical School Auditorium, New York Hospital, February 20. The question "What Does a Nutrition Program Mean?" was discussed by Dr. Helen S. Mitchell, Lillian Anderson, and Pauline Murrah; "What is the Part of the Health Officer?" by Dr. Jerome Meyers; and "How Are We to Teach Lay Groups?" by Ruth Barker. The first lecture of the course was held at Cornell Medical School Auditorium, New York Hospital, February 27, with S. Margaret Gillam presiding. Dr. Hazel E. Munsell spoke on "Essentials of Nutrition in Everyday Living." Octavia Hall Smillie, Marie Krause, and Ruth Thoresen took part in the discussion which followed, and nutrition exhibit material entitled "Kipsbay Yorkville Health," was displayed.

Nelda Ross presided at the second meeting at the Presbyterian Hospital, March 2. Lecturers were Louise Stephenson, who spoke on "Essentials of Nutrition for the Family," and Dr. Dorothy Nyswander, whose topic was "Teaching Nutrition Essentials Effectively." "Conserving Food

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Delicious all-beef hamburger ... in a new, ready-to-use style!

Now—hamburger that gets hurrahs! Both staff and patients will enjoy the juicy tenderness and fine flavor of Swift's Premium Hamburger Patties. They're good *every time* because they are made *only from top-quality, Government inspected* beef . . . carefully ground . . . and quick-frozen.

These economical patties are ideal any way they're served—in sandwiches . . . as a main meat course. They can be baked, fried or broiled—*without preliminary defrosting.* They're identical in size—come packed 8 or 16 to the pound. You can order exactly the number you need . . . figure portion costs right down to the fraction of a cent.

Many hospitals and other institutions are finding Swift's Premium Hamburger Patties an excellent way to simplify buying . . . to get the truly good meat that wins all-around approval. Try Swift's Premium Hamburger Patties. Ask your Swift salesman, or write to

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1-ounce or 2-ounce patties—packed quick-frozen in convenient 9 and 18-pound containers. Special arrangements can be made to supply patties of other sizes.

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FOR APPETIZING LUNCHES, DINNERS

Martha Logan SUGGESTS BAKED HAMBURGER PATTIES

Place Swift's Premium Hamburgers without defrosting into a dry baking pan. Then, bake them for ten minutes in a 450° oven. That's all! You get juicy, delicious hamburgers. This method is ideal in the preparation of large quantities, as no turning is required.

Values" was the theme of the third lecture on March 6 at Montefiore Hospital, Lenna F. Cooper presiding, at which Carolyn Klutey, Bertha Nettleton, Dr. Mary de Garmo Bryan, and Elizabeth Wilson spoke on the subjects of canning, freezing, drying and storage, and milling and enrichment of food. A general discussion and movies, including "Proof of the Pudding," followed the lecture period. The fourth and final meeting of the series was held March 9 at Mt. Sinai Hospital, where Ruth Barker, Frances Foley Gannon, and Ruth Hecht spoke on meal planning, food purchasing, and the food stamp plan as phases of the general topic, "Your Food and Your Money." Dorothy M. Stephens presided.

New York State Dietetic Association. The outstanding meeting of the year for western New York dietitians was a joint gathering in Rochester, February 12, which was attended by large delegations from Buffalo and Syracuse. The guest of honor and speaker was Nelda Ross who talked about the activities of members of the American Dietetic Association in the present emergency. The meeting followed a dinner at "The Spring House" just outside of Rochester.

Jessie Cole has been appointed chairman of education of the State Nutrition Committee. Other members include Mame T. Porter, Laurna Barber and Marion Van Liew.

Margaret Queneau, nutritionist in the State Department of Health, is conducting a study of "Diets of Industrial Workers" along with general community health education in Utica.

Margaret Bicknell, home service director of the Niagara Hudson Company in Buffalo, has just published a book in pamphlet form entitled, "Healthy Americans." It is designed to meet the needs of the average homemaker for a nutritional guide, and tells the story of the "B. Wise Family." Its clever illustrations include "Mr. and Mrs. B. Wise" and "Junior," also "Mr. C. Vitamin"; "Miss Mineral" and a "starved" garbage can. The advice covers meal planning, food purchasing, preparation and storage, and kitchen economy, all written in a simple, attractive and usable manner. Copies are free to anyone interested, a contribution of the Niagara Hudson Company to the national nutrition program.

North Carolina Dietetic Association. Sallie Mooring, City Memorial Hospital, and Mrs. Salome Winkler Wells, North Carolina Baptist Hospital, are serving on the Disaster Preparedness and Relief Committee, American Red Cross, and on the Medical Aid Division of Civilian Defense for Forsyth County. They are co-chairmen of the Dietary and Food Sanitation Committee, OCD. Mrs. Wells has also recently completed teaching a nutrition unit to the Winston-Salem Woman's Club. Other dietitians working with them are: Mrs. Elizabeth O. Meinung, Salem College; Doris Lee, City Memorial Hospital; Florence Skroch and Lillian Fishman, Baptist Hospital; and Mary J. Beckerdite and Beth Beyers, Bitting Memorial Hospital.

All American Dietetic Association members in Winston-Salem have volunteered their services to teach the Red Cross Standard Nutrition Course.

Oklahoma Dietetic Association. Recent guests of the association included Dr. Helen S. Mitchell who met with various nutrition groups in Oklahoma City the first week in March, and Miriam Birdseye, guest speaker at the meeting of the state nutrition council in February. Gladys E. Hall, educational director of the A. D. A., inspected the student courses at Oklahoma A. &. M. College, The University Hospitals, and St. Anthony's Hospital, Oklahoma City, March 1-5.

Rochester (Minnesota) Dietetic Association. At an informal meeting February 7, Gundrun Carlson spoke to the association on "Food Habits and Customs in the Scandinavian Countries." Miss Carlson, a member of the American Dietetic Association, was Trade Commissioner to Norway for five years.

Dr. J. L. Bollman, Institute of Experimental Medicine, The Mayo Clinic, spoke at the regular monthly meeting, February 16, on the experimental use of high-protein and high-carbohydrate diets in liver damage of animals.

Texas Dietetic Association met in Austin, March 13-14, with National Defense as the theme of the program. Activities of colleges and other organizations in the state nutrition program include the following: An interesting plan being carried on through the Foods and Nutrition Department of the Texas Technological College is the demonstration and use of surplus commodities in serving meals. The classes were arranged through the local Federated Women's Clubs. The consumer interests committee of the Texas Home Economics Association, under the leadership of Jennie Wilmot, of the University of Texas, is preparing a leaflet on the purchase of food and recommendations for its use to accompany the Texas Food Standard compiled by the state nutrition committee. Standard Red Cross nutrition and canteen courses are being given in Galveston by Clara Matthes and Grace Sweatt, of John Sealy Hospital, and Alice Calder is teaching a Red Cross nutrition course in Dallas. Two more courses prepared by the South Texas Dietetic Association and sponsored by the Houston Unit of the American Women's Voluntary Services, Inc. were started in March.

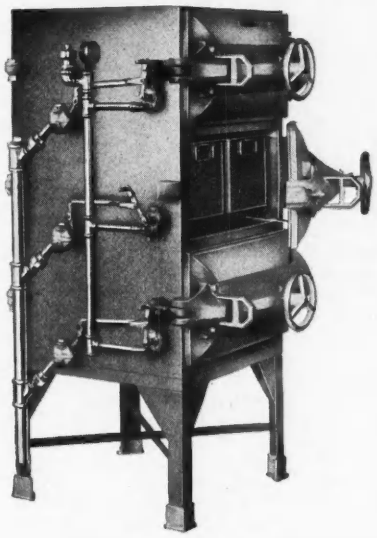
Four former San Antonio dietitians have accepted positions as Army dietitians: Jane Taylor and Dorothy Langdon, Fitzsimmons General Hospital, Denver; Esther Musil, Fort Leonard Wood, Missouri; and Helen Cavin, Fort Sam Houston. Jean Pierce of Amarillo is at Scottish Rite Dormitory, Austin, as assistant to Selma Streit; Mary Sue Love is assistant dietitian at Brackenridge Hospital; Katherine Ivy is dietitian at St. David's Hospital. Students of Texas University training course for this year include: Mrs. Fay Anthis, Cleo Arnett, Helen Beck, Mrs. Frances Cochran, Mrs. Mary Stuessy Gray, Oleta Green, Vera Grieve, Florence Huchel, Mary Raymond, Elizabeth Kerschbaum, Beatrice Pearson, Mrs. Frances Sims, Ailene Stegner, Ann Taylor, Martha Scott Taft, Mary Lou Tankersley and Helen Widick. Carolyn Dempsey, formerly of Texarkana, is now dietitian at the Children's Hospital of Texas.

Utah State Dietetic Association met at Carlson Hall, University of Utah, January 30, with Anna Marie Driscoll speaking on "Thrift in Food Buying." Mrs. Helen Stevens, state president of the home economics association, spoke at the February meeting at Holy Cross Hospital.

The Utah State Nutrition Council sponsored nutrition refresher courses at the University of Utah, with Dr. Rose H. Widtsoe in charge, January 22-24; at Utah State Agricultural College, with Dean Christine B. Clayton in charge, January 28-30; and at Brigham Young University, with Mrs. Irene S. Barlow in charge, January 22-23. The Council also sponsored a second series February 13-14 with Julia Lee Wright in charge.

Maxine Merrick, St. Mark's Hospital, Salt Lake City, has accepted a position at Fort Baker, San Francisco. Graduating students from Latter-Day Saints Hospital include: Leora Steffenhagen, now at Latter-Day Saints Hospital, Idaho Falls; Hope Allred, Price City Hospital; Bessie Rogers, to Dee Hospital, Ogden; and Mabel Johnsrud to St. Mark's Hospital, Salt Lake City.

Recent marriages include: Sylvia Marsell to Dr. Abram Cannon, and Leora Steffenhagen to Mr. George Galloway.



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Virginia Dietetic Association. The monthly meeting of the Tidewater Dietetic Association was held at the Veterans' Administration, Kecoughtan, February 18. Dr. Benjamin Miller read a paper on prevention of food poisoning. Dietitians present were: Louise Forester, Kings' Daughters' Hospital, Portsmouth; Lois Shore and Janet Eley, U. S. Marine Hospital, Norfolk; Minerva Hall and Erna Behrend, Norfolk General Hospital; Clara Soter, Buxton Hospital, Newport News; Laviana Slocum, Riverside Hospital, Newport News; Emily Carnan, Phoebus; Helen Walker, U. S. Army Hospital, Fort Monroe; Margaret Page and Louise Mulherin, U. S. Veterans Hospital, Kecoughtan. The group made plans to equip a mobile kitchen for canteen work in this area. Red Cross courses are being given for white and negro groups in Norfolk and Hampton by members of the association.

Sally Ann Kurka has assumed the duties of nutrition consultant, Bureau of Maternal and Child Health, Virginia Department of Health. A nutrition program to be conducted through established clinics and the school lunch system is being planned. A 3-day institute was held for nurses in the State Department of Health.

Annette Felman has been appointed nutritionist, Department of Preventive Medicine, Medical College of Virginia, Richmond, replacing Mable Blount who resigned to be married to Dr. Ralph Buttermore. Doris Woodward, formerly dietitian at the University of Virginia, Charlottesville, has accepted a position as cafeteria supervisor at the Dupont de Nemours Plant, Martinsville.

Margaret Fitzhugh and Helen Robertson have been appointed local chairmen of arrangements for the Conference of Food Service Directors to be held in Richmond, November 1942. Chairmen of committees are: Program, Lois Watts; Publicity, Martha Creighton; Educational Exhibits, Sally Ann Kurka; Commercial Exhibits, Francis Ferrell; Hospitality, Bertha Watson; Trips, Anne Jarrett; Registration, Francis Moore.

Through the activities of the Richmond Nutrition Committee, over 600 women have completed courses in normal nutrition. These were conducted by volunteer teachers from the local dietetic and home economics association. Through the cooperation of the Junior League, a series of radio talks has been presented. A survey of lunches chosen by school children has been made, and assistance in nutrition education in the schools is being given. A committee is working on budgets for low incomes for use by the local case workers. The city has been divided into precincts and blocks, and an extensive campaign is under way for extending nutrition information to all women in the city. Representatives of the Federal Security Agency are observing the experiment.

Washington State Dietetic Association. The program for the current year has included the following speakers and topics: Dr. Helen Hogue, Secretary of the Washington Society of Mental Hygiene, spoke at the January meeting in Seattle on "Changing Attitudes in Child Guidance." W. Walter Williams, Chairman of the Washington State Defense Council and L. N. Thomason, Seattle Civilian Protection Division, discussed the subject, "America at War" at the dinner meeting Friday, January 30 which concluded a two-day joint conference of the Washington Dietetic Association and the Western Washington Home Economics Association.

On January 31 Dr. Jennie I. Rowntree discussed "Home Economics in Action" at the University of Washington, followed by a round-table discussion of Food Prices and Food Purchases, School Lunches, Emergency Feeding, Home Care of the Sick, Land Use and Food Conservation, Emergency Care of Preschool Children, and Clothing in the War Emergency.

The Dietary Department at Fort Lewis has grown rapidly this past year to take care of the great increase in Army personnel at the Fort. Lois Hamilton, head dietitian, who trained at Walter Reed Hospital, reports a capacity of 2500 beds, and a dietary staff composed of the following: Mrs. Beulah Archer, who received her training at Henry Ford Hospital; Dorothy Eicker, Maxine Armstrong, and Mary Wall, graduates of the Seattle course; Mabel Ulasak Hahneman Hospital, Philadelphia; Alene Ness, Michael Reese Hospital, Chicago; Phyllis Cronin, University of Minnesota Hospital; Leah Teale, Pennsylvania Hospital; and Irene Waddell, Portland course.

Margaret E. Terrell, director, administrative dietitians training course, and Ruth Walker are working on the Seattle Emergency Food Committee. Miss Walker is in charge of Seattle school lunchrooms which are being used as emergency stations. Miss Terrell is planning mobile units and would be very happy to exchange ideas with others who are working on similar projects.

The following students are now enrolled in the administrative dietitians training course at the University of Washington: Josephine Kincaid, University of Idaho; Mary Ann Jarvis, Texas State College for Women; Margaret Pettyjohn, University of Mississippi; Ruthmarie Hulbert, University of Washington; Elizabeth Wright, University of Illinois; Jean Read, Butler University; Bette Knox, Iowa State College; Marguerite Gustafson, Purdue University; and Laurel Appell, Colorado State College. Students received in January in the Seattle course for student dietitians are: Betty Renshaw and Ruth Nesler, Iowa State College; Lorraine Stroup, Washington State College; Ida Samuelson and Elaine Sherman, University of Washington; Helen Sutton, Oregon State College; and Elaine Johnson, University of North Dakota.

New appointments to the staff of the University of Washington include: M. Margaret Richert, University of Nebraska graduate, and formerly in charge of Berkeley Hall, Yale, now women's residence hall manager; Margaret O. Brown, graduate of the University of Illinois, who managed her own tea-room in England until after the outbreak of the war, now manager, University Commons.

The following marriages have been announced: Charlotte Nilson, dietitian at Swedish Hospital, to Mr. Frank W. McPherson, Fort Lewis; Eleanor Ferguson to Mr. Robert N. Fischer, both of Fort Lewis; and Lois Cooper to Lt. Jon Gunn, Fort Lewis.

Wisconsin Dietetic Association has postponed its annual meeting from April to November in order to devote more time to refresher courses and defense work.

Approximately 350 persons attended the special refresher courses given by Susan West at Milwaukee-Downer College and by Sister Mary Albert at Mount Mary College.

Invitations were issued by the state nutrition committee to 300 persons in Wisconsin to attend the highly technical refresher course at the University of Wisconsin February 6–7. Early in the spring the committee will sponsor a group of regional meetings so that new nutritional findings may be presented in all parts of the state.

Because of demand, a second nutrition center was set up in Madison. These centers are established through the joint efforts of the Madison Dietetic Association and the Madison Home Economics Club. Local papers and radio stations have given excellent publicity to the project. Questions on nutrition problems asked at the meetings are used as a basis for a series of radio broadcasts over station WHA. Attendance at the meetings ranges from 50 to 100.

Mary I. Barber spoke before the Milwaukee Home Economics Club and the Milwaukee Dietetic Association in February on "Feeding Marching Men," a subject received with great interest.

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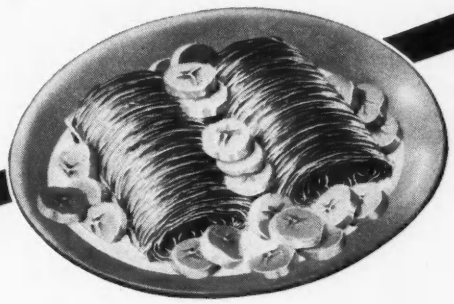
Who realize the importance of Whole Grain Foods in the diet



The more we learn about food chemistry the more we realize that our forebears were right in depending on whole grain foods. Today these foods stand high in the program of the Committee on Foods of the National Research Council.

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Nabisco Shredded Wheat supplies *all* of whole wheat's energy. It is low in cost and extremely easy to make ready for serving. Two biscuits with milk provide a substantial one-dish breakfast, hearty but not too heavy for the normal person.

In recommending this cereal, which has been recognized for more than 45 years as an excellent "standby" food, it is well to mention the full name, "Nabisco Shredded Wheat," which is the original Niagara Falls product.

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The Milwaukee Dietetic Association is purchasing nutrition cards entitled "Eating for More Abundant Health," published by the Wisconsin Dietetic Association, so that all groups in Milwaukee teaching nutrition may have the same source material. Five thousand charts captioned "Eat the Right Food," published by the Office of Defense Health and Welfare, Washington, have been distributed through the schools, clinics, restaurants, grocers, etc.

Members of the Milwaukee Dietetic Association are participating in the Red Cross teaching program. Six centers have been opened at which the prescribed twenty-hour nutrition course is given. In addition, all home nursing classes are calling upon the dietitians to give the designated lesson on nutrition. Elinor Kilkenny, Dagmar Tuomin, Winona Cruise, and Mayme Lenzmeier attended the review course in nutrition sponsored by the University of Minnesota center for continuation study.

News from our Advertisers and Exhibitors. All dietitians concerned with the practical problems of feeding people should not fail to avail themselves of Mary Dahnke's collection of tested quantity recipes using Kraft's Cheese. A request addressed to Miss Dahnke at Kraft Cheese Company will be sufficient to put your name on her mailing list. Cheese-rice cutlets is the latest addition to her appetizing list of hot cheese dishes.

A recent issue of "Kitchen Chatter," the attractive house organ sponsored by *Libby, McNeill & Libby* and edited by Mary Hale Martin, featured canned pineapple, giving food values in terms of vitamins, uses, can sizes and specifications, and recipes. Assorted recipes in file-card size using other Libby products were included. Mention was made of a bulletin entitled "Hunches for Nutritious Lunches" which Miss Martin has prepared in response to requests for lunch box suggestions and which may be obtained by addressing your request to her in care of *Libby, McNeill and Libby*, Chicago.

As the Advanced Student in Institution Management Would Have It

The following are samples of the answers forthcoming from institution management seniors in a certain college to the following questions:

What is a bain-marie? "A large piece of equipment used as a warming oven for dishes and to keep foods hot." "A type of steam table which was used quite extensively a few years ago, but which has now been replaced by a better steam table. The bain marie has water in the bottom of it which is heated by a gas burner." "A large steamer which is used to keep food hot after it has been prepared."

What is a filet? "A slice of meat, usually used in connection with fish, which is just a portion of the fish, not the whole fish." "Filet is meat." "A thick steak. It may be of tenderloin, beef, fish, etc. Sometimes it has bacon wrapped around it. Usually it is broiled."

Define the term à la carte: "That type of service in which all food is served on the table at one time. All food with the exception of the bread is placed on one plate. The dessert is not included with the meal as it is advertised on the bill of fare." "An order of food prepared after the order is given by the customer." "The type of service of a meal in which all the food is placed on the table when people are served." "The food is brought via 'cart'."

What is a capon? "A capon is a male chicken which has been catherized."

Define the term micromotion: "Motion which is continuously in one direction or series of directions such as a continuously rounding motion." "A study of motion in which every movement of a subject is recorded on a floor plan (usually)."

Define the term table d'hôte: "A set menu. All food is placed on the table and the customer may choose what he wishes to eat." "The menu as is."

What is a Smörgåsbord? "A table on which a Swedish dinner is served. The table usually includes everything from 'soup to nuts' and is served buffet style." "A Swedish custom used in our country to serve foods. It is a long table with all sorts of foods (generally Swedish). It's your pleasure to go back as often as you wish."